METHODS OF TEACHING SHORTHAND

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THE METHODS OF TEACHING SHORTHAND

THE METHODS OF TEACHING SHORTHAND

A PRACTICAL TREATISE
ON THE SOLUTIONS OF
CLASSROOM PROBLEMS

By

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PREFACE

In the pages which follow there is outlined a plan of instruction for shorthand classes that, it is hoped, will furnish practical solutions to many of the problems that confront the teacher in the classroom. So far as known this is the first attempt to formulate the principles of shorthand instruction using modern principles of pedagogy as a basis ; it will probably be followed by similar books dealing with the pedagogy of other commercial subjects, for preparation for a business career is every day becoming more important and it is only a matter of a very short time when the most efficient methods of imparting this knowledge or skill will be established. At the present time there are many ideas in this branch of education that are unthinkingly accepted and have for their *raison d'être* only a questionable tradition.

The principles of instruction formulated in this book took form as a result of the work done in connection with the course which the writer gave for two years in the Methods of Teaching Shorthand and Typewriting at Adelphi College, Brooklyn. The teachers who were enrolled brought their classroom problems for discussion and the experience of the many was used to find the solution. These lectures were further enriched by reports of the

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teachers covering extensive observations of shorthand classes in New York City and vicinity. Gradually the principles underlying the various methods of instruction began to shape themselves and the writer was induced to put them into book form for the guidance and assistance of those who wish to enter the ranks of shorthand teachers.

While all of the shorthand examples mentioned deal with Pitmanic systems, yet in the main the principles enunciated may be applied regardless of the system of shorthand taught; the book is not intended as a shorthand reference book, but it deals with questions of teaching technique that are likely to arise in any class, no matter which system is used.

If teachers who read this book are moved to challenge their methods of instruction, or perhaps even find a few helpful suggestions, an inspiration or two, the work will not have been in vain.

In conclusion the author wishes to express his thanks to the many earnest teachers who worked with him in his courses at Adelphi College, and to the many friends who, by their words of encouragement, made the work pleasurable. A word of appreciation is also due to Mr. Edwin A. Bolger, Commercial High School, Brooklyn, for his kindness in reading the proofs.

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Methods of Teaching Shorthand

CHAPTER I

TEACHER'S PREPARATION

Rise of Commercial Education.

Of the many changes that have taken place in the field of education in the last twenty years, the one which has been the most pronounced and important is the offering of studies which directly prepared the student for the livelihood he is under obligation to make. Those in high educational circles came to the realization that the aim of elementary and secondary education was not solely to prepare for college, that the great majority could never hope to attend a higher institution of learning and that something serviceable must be done for them. As a result the rise of commercial education, manual training and domestic science has been steady and sure. Education is coming to be regarded more and more as a preparation for life, one of the most essential duties of which is that of earning a living, and the testimony of business men as to the utter unfitness for practical affairs of those

who have completed their studies in our elementary and secondary schools has had its effect. It is not that the schools have failed in doing their work, but that business procedure has become so systematic that one without training in its customs and usages is handicapped. On all sides there has been a growing demand for a closer relation between the school and the life of the community for which it is the purpose of the school to prepare its children.

The preparation of those who were to teach the academic subjects has become more exacting, and the length of time they must undergo training has steadily increased. The same tendency is observable in regard to teachers of commercial subjects. At first the qualifications were educationally low; before the public schools took up the work in business branches, instruction in bookkeeping, penmanship, etc., was given by an itinerant teacher whose greatest qualification was his ornamental penmanship. Later the business schools were organized and the main requirement for employment was a good knowledge of the subjects taught. When the public school undertook to offer courses in commercial branches, for some reason or other the examiners who were to judge the candidates did not require as much preparation or training from commercial teachers as they did from teachers of other branches. This was due most likely to the fact that the number of those who had the technical

Preparation of Commercial Teachers.

training as teachers and possessed a knowledge of the subjects was much too limited to supply the demand. There was always at hand the means of learning shorthand for those who had the technical training as teachers and the general education required, but up to two years ago it was practically impossible for those whose knowledge of shorthand was adequate, to secure pedagogical training in their subject except by taking employment in private schools and learning as a result of mistakes, or in some cases receiving the benefit of the years of experience of the conscientious proprietor of the school. This certainly worked a hardship on private school managers, and after it they could easily understand the feelings of the man who "broke in" the inexperienced stenographer only to have her take another position as soon as it offered. The colleges have seen the need of training for commercial teachers and they have recently been offering courses for them. Already there has been a great influx of college graduates in the ranks of teachers of shorthand and in a short time there is no doubt that the invidious distinction in the requirements will be wiped out.

Physical Qualifications.

The preparation of a teacher of shorthand may be considered under four heads; (*a*) physical, (*b*) educational, (*c*) practical, and (*d*) pedagogical. The teacher of any subject needs to have good sight, hearing, and voice, but in shorthand these things are doubly important. There are so many fine distinctions

in the shorthand characters, differences in shading, the placing of dots and dashes accurately, strokes that show minute variations in length, that keen sight is absolutely essential. Obviously there is so much reading to be done by the pupil that unless the teacher can hear well there is always the chance of an embarrassing mishearing. Likewise, in teaching shorthand there is greater need for a well modulated, even, pleasant voice than in almost any other subject because there is so much dictation required and nothing will produce disorder and fatigue so quickly as a monotonous, a drawling, or a hysterical falsetto voice. Again, shorthand dictation is frequently taken by the students under a great nervous strain, and if the voice of the dictator is harsh or disagreeable, it is not at all unlikely that the student will get a case of " nerves " and lose a portion of it. There is nothing unusual in the experience of students who claim they can take dictation from one person at a certain rate and when another person dictates at the same rate they cannot get it at all. It is important, therefore, that the teacher have a well-controlled, pleasing voice, and that care be taken with enunciation so that every syllable may be heard distinctly.

The general education of the shorthand teacher should be just as good as that of the teacher of academic branches. While a college education is not absolutely essential, the one who has had such training is likely to be more comfortable

and more successful than the one who is without it. This does not mean that the possession of a college diploma is all that should be required; not by any means. But it does mean that the one so equipped will be on the same level as his or her colleagues and this will do much towards rendering agreeable daily association with those who have had the training and who possess the culture for which the college diploma stands. Of course there is no denying the fact that a man without a college education may be better educated than one who has secured his degree, but the chances are against it. At any rate, the teacher should be possessed of a general education that will enable him to co-operate with the other departments in the school, and this demands that he shall have an intelligent grasp of the other subjects that go to make up the course.

Academic Preparation.

The teacher of shorthand requires a broad education also because an opportunity is presented in the selection of his dictation material to bring before his class many facts of value to them that they would otherwise never meet. Many commercial courses omit history and in such a case it is not unusual for a teacher, by a judicious selection of historical speeches and descriptions, to bring many facts to the attention of the students that they would otherwise never encounter until their ignorance embarrassed them. And this can be done without neglecting any part of his own work. Likewise, simple and

rudimentary scientific data may be used to good advantage, but the teacher must be educationally equipped to interpret the facts and to answer questions concerning them that are likely to arise.

Knowledge of Subject.

Besides this having general knowledge, the teacher of shorthand, like the teacher of any other special branch, should know his subject thoroughly. This means that he must not only know the principles, rules and exceptions that appear in the text but that he must be able to do himself what he wishes his students to be able to do: to form instantly the correct outline for any unfamiliar word by the application of the principles of the system. To instruct intelligently, it is necessary to have an intelligent grasp of the subject; what is known vaguely, is taught vaguely; if shorthand appears to the teacher to be a mass of arbitrary characters, his instruction cannot be anything but arbitrary, and any other kind of instruction is better. It has frequently been said by those who have a smattering of the subject that "brains are of no use in shorthand" because the people making the declaration were not successful in choosing the correct outline the first time and they were unable to see the advantage of the standard form over the other. No modern shorthand system is as arbitrary as it first seems. The genius of Isaac Pitman put an intelligent plan into geometric shorthand that becomes more apparent the more it is studied and practised, and as it unfolds before the enthusiastic

delving of the one who searches earnestly, it becomes a fascinating study that disregards all labor or time spent upon it. There cannot be any doubt that a system of shorthand which enables the writer accurately to represent any enunciated sound in the language is the product of the labor of a scientific mind. Many changes have taken place, and are now taking place, in shorthand systems; they are in a state of constant flux; one expedient follows upon another and is abandoned for yet another; but all this takes place in accordance with fundamental laws which are worked out in the experience of the system's practitioners. It is the duty of the shorthand teacher to study these laws and to seek the "whys" and "wherefores" of his subject in them. Then and then only can he instruct intelligently and bring his students to the proper attitude towards the subject; then will they feel for it, not the contempt which is sometimes evidenced by a young logical mind that finds no satisfaction in its apparent inconsistencies, but the admiration and appreciation of which the art is worthy.

Practical Experience.

As stated before, the teacher should certainly be able to do that which he expects his students to do, and it is necessary that he should have practical power in the subject at least to a reasonable extent. The old proverb "don't do as I do, but do as I say," has fallen into innocuous desuetude as a rule of ethics. There is now a tendency to make the

sayers become doers. The more power in the subject the teacher has, the better, for it generally indicates a love for the subject, and an enthusiasm in it that is half the battle. If a teacher has gone through the mill of practice and training until he can himself handle successfully a stenographic assignment of a little more than average difficulty, there is little likelihood of his assuming that undecided, lukewarm, matter-of-fact attitude toward the subject. He will be more likely to understand the laws of the system and have a contagious enthusiasm for it that will energize every word he says about it. The teacher " on the top of the mountain of practice sees infinitely more than the teacher in the valley of theory."

Again, the shorthand teacher's education is not complete unless he has had practical experience in the use of the art. He must have gone into the office and have shared the responsibility actually to get the spirit of business coursing through his veins, to cultivate that power of organization that is characteristic of the business world so that he can bring it to the class and make it part of his instruction. He must learn at first hand what is customary in business practice, and furthermore he must keep posted on these things even after he has left so that his knowledge is always fresh and up to date. The teacher who has never sat at the draw-board of the business man's desk and acted as stenographer, who has never filed or found correspondence, and who has to teach from

the impressions obtained from a miniature business world set up in the imagination is handicapped and should take the first opportunity to get the experience.

If a teacher should possess good sight, hearing and voice, and have a broad, general education, a thorough knowledge of the subject and reasonable power in the practice of shorthand, he might still not attain his greatest efficiency without the knowledge of the laws of pedagogy and the ability to apply them to his subject. Stenography is no easy subject to teach, and all the skill of the trained instructor is required to produce the best results. In the elementary instruction, the presentation of the principles offers as good a field for the application of the laws of teaching as does instruction in mathematics or a foreign language. The teacher who can apply the laws of attention, interest, apperception in his work, who can present the theory in a logical way renders his work less difficult and more lasting, and contributes his share towards the general development of the student's mental capacities. Pedagogical training the shorthand teacher should have for the work that he is called upon to do. The work is exacting, and little is understood about the nature of the problems it presents. In the speed room there is an opportunity to employ all the laws of habit building to their greatest extent; every day some phase of the law of motor reaction is presented to the teacher

Training as Teacher.

and unless the pedagogical training is there, his efforts result in wasted energy and unfruitfulness.

Of course it is possible for a teacher to succeed in his calling without any one of these qualifications, maybe without any two, but that is not the point. The minimum requirement for a teacher is not under discussion. A man may be without a limb and get along through life almost as well as another not so handicapped, but there is a difference. The ideal teacher will possess all these qualifications, and while it is said that ideals are never realized, the important point is that he realize his limitations and set about to remedy them.

Ideal Teacher.

CHAPTER II

AIM OF INSTRUCTION

EVERY teacher who hopes to do his share in the work of educating boys or girls has need of a conscious, definite aim for the intelligent direction of his efforts. Without such an aim there exists no norm or measure by which to determine the value of any method of instruction or the relative value of any series of facts, or the utility of any set of skilful operations. To the lack of such an aim may be attributed many of the evils of education of which critics justly complain; over-emphasis on unimportant details, teaching of facts unrelated to life, unsuitable courses of study, and many others may all be traced to the fact that those engaged in the work of education had not formulated definite principles along which the work could be carried on; or when these principles have been established they were lost sight of in the concentration with which particular aims have been pursued. While it is true that the ultimate aims of education are always undergoing change, and that it is impossible to devise such a comprehensive scheme as to include these various ends, yet it should be possible to select the fundamental verities which appear in these various aims and have the work proceed bearing them in mind.

Necessity for Definite Aim.

Influence of Aim on Instruction.

The Committee on School Inquiry which lately investigated the schools of New York, found that the greatest evil in the field of commercial education was traceable to a misconception of the aim for which the schools were established and maintained. In their curriculum and in their teaching they emphasized clerical preparation and lost sight altogether of the ultimate aim of commercial education, of which preparation for clerical positions formed approximately only fifteen per cent. If such a thing is possible with a system of education, it is much more likely to happen with an individual teacher, especially when his efficiency is judged exclusively upon the attainment of success in the particular, narrow, specialized aim of his work, as is so frequently done. When a teacher is rated on the number of students he promotes, or on the number of pupils who are successful in a certain examination, he is very likely, indeed, to lose sight of the ultimate aim of education for his pupils, and to turn all his attention to the things which are taken as an indication of the success of his instruction. However, the ultimate and proximate aims which the teacher of shorthand should possess are not mutually exclusive, neither are they incompatible with efficient work. All that is necessary, is to formulate definitely what ends the instruction should accomplish and organize the classroom work so that each operation will have a direct bearing upon the general plan. Thus the way in

which the teacher provides for the care of the mechanical details incident to the conduct of a class can be made to show the operation of certain definite principles in the ultimate scheme of education, the plan used for the adjustment of matters of a disciplinary nature, the methods used in the presentation of the subject, and, in fact, every phase of the work can be related in the same way and with greater economy than if the teacher persists in the one idea of having his class succeed in raising their speed from seventy-five words per minute to one hundred. This does not mean that instruction in shorthand should become of secondary importance for the shorthand teacher. Not by any means. To accomplish what is expected of him will take great effort and conscientiousness, nevertheless these things which enter into the general equipment of the student for life should not be lost sight of completely, especially as they can be woven so effectively into the processes of instruction.

When a teacher of shorthand steps into a class it is as necessary for him to have a well-defined concept of the ultimate end of education as it is to have a thorough knowledge of his subject. Entering into this concept will be considerations that make up the universal conditions of life, things common to all men such as health, character, and the higher utilities of life ; data will also be drawn from the special conditions in which the student must in future labor, such as special knowledge

or skill of particular use in his earning a livelihood; and last, the data designated for instruction by the course of study or by his superiors. The arrangement is in accordance with extension; not according to relative importance. For the teacher, it should be the reverse: (*a*) the acquirement of knowledge and skill in shorthand; (*b*) the acquirement of knowledge and the formation of habits that will be of especial use in the field of commerce; (*c*) the knowledge, habits, and ideals that enable the student to become an efficient member of society. This should be the teacher's threefold aim.

Threefold Aim.

The first division of this aim is altogether in the hands of the teacher and his immediate superiors. The second division, that relating to the acquirement of knowledge and habits that will be of especial use in his future occupation may be effected by the correlation of the different subjects and the co-operation of the different departments of instruction, as well as in the formation of special habits of industry, co-operation, analysis, etc. The third division, that having to do with the general things of life, will be influenced by the general knowledge of the teacher, his culture, his judgment of values, and his ideals, all of which, if his heart is in his work, he cannot help but expose to the observant minds of his pupils. The teacher of shorthand, therefore, will see that he has a threefold responsibility in his instruction:

to prepare for an occupation, a vocation, and for social and civic responsibility. The one who confines himself to the occupational aim will not see the necessity of correlating the work in shorthand and typewriting with bookkeeping, law, English, arithmetic, etc., and it would not be unreasonable to assume that he expects all of his students to become stenographers and to remain such for the rest of their lives. The teacher who has only the vocational aim is the one who is the victim of the narrow conception of education known as "the bread and butter aim." He realizes his responsibility for the preparation of the student to attain commercial success, but he fails to recognize the responsibility which he shares to prepare the student for the efficient enjoyment of that success.

Occupational, Vocational, and General Aim Explained.

The ideal teacher is the one who appreciates his full responsibility in each of these instances.

One of the serious objections made against one of the commercial schools of New York City by the Committee of Inquiry was that its course attempted to fulfill a double purpose. The first was to prepare for business and give general culture and training for citizenship; the second was to prepare for entrance to higher institutions. In this connection the report states: Page 23—[1] "The aims of the four-year course are . . . .

[1] *Report on Commercial Education*, by Frank V. Thompson, p. 23.

apparently twofold, namely, a preparation for business and for life, and for higher institutions.

Aims Not Mutually Exclusive.

The advantages of specialization are lessened in this double objective. The whole theory of special schools is to devote the major effort to some one aim. The attempt to include preparation for higher institutions is unfortunate. It was explained to the investigator that fitting for life was not an optional and distinct aim, but a concomitant of the purpose of this school which, while fitting boys for business, gave general culture and equipment for citizenship. This is entirely praiseworthy, but it ought not to be necessary to assume that a proper vocational education does not contain within its own meaning these general assumptions. Fitting for life has long been stated to be the aim of general education ; but the definition of the meaning of the expression has too often not been clear or satisfactory." This analysis of the aim of the course of study has a direct bearing upon the aim of the teachers since it is through the teachers only that the aim of the school can be realized. From the quotation it can be seen that specialization does not justify the neglect of the ultimate aim of education, but as it has been previously pointed out, this aim must be worked in harmoniously with the particular aims of the teacher so that it is not a thing apart, having nothing in common, as is the case in the effort to prepare for business and life, and for the higher institutions

as well, so long as the demands of the higher institutions differ from those of business. There is no multiple objective in a threefold aim which consists of fitting the student for an occupation, for a vocation, and for the other things of life. The aim of the teacher should embody everything that appears in the aim of the school, not necessarily in the same proportion, but in some proportion. The school aim is not the aggregate of the aims of the particular teachers, but the aim of the teacher should reflect the aim of the school. To have one department limit itself exclusively to the occupational, another to the vocational, and another to the ideal things of life would be as sensible as a scheme of instruction in which the students were expected to speak or write correctly only in the English class, to operate the typewriter by touch only when in the typewriting class, to figure correctly only in the mathematics class, and so on.

Aim in Private Schools.

In the private business schools the teacher is not concerned with this matter of aim. In these schools there is a simplification of aim, the purpose of instruction being in most cases frankly occupational. The student registers with the single intention of being prepared to hold a position as stenographer or bookkeeper in the shortest possible time, and the school fulfils its responsibility when it turns out an occupationally efficient product. The course of study and the time required to complete it

indicate that these schools make no pretension to a higher aim. And there is no reason at present why they should; their existence is due to a special demand, that of preparation for an occupation, and in the great majority of cases they have acquitted themselves well of their obligation. However, they have always stood in the van of progress in commercial education, and it would not be surprising to see a great re-organization of them take place in which the course of study would be modified to include merchandising, advertising, business organization, salesmanship, etc., even before they are taken up by the public high and secondary schools. Then the teacher in the business schools will have to equip himself so that he can modify the aim of his instruction to reflect the aim of the school.

The threefold aim described at the beginning of this chapter may be considered by the teacher of shorthand under the heads of (*a*) general, including the vocational and ideal aims, and (*b*) special, the occupational aim. Under the general aim the teacher would have to see that his pupils formed proper ideals, cultivated good manners, developed favorable habits of speech and action, etc., in so far as he was able and the opportunities presented themselves He would also see that his work is correlated with other subjects in the course with the object of making the pupil a man well-equipped in all departments of business. Having this general aim it might be wise to see how

it could be worked out in the various classroom operations In the wide variety of dictation material available to the teacher of a speed class, something along this line might be done The subject can also be used to bring about good mental development in that there is constant exercises in close observation, analogy, reasoning and judgment, and the teacher can, perhaps, present his lessons logically enough to lead to their employment By correlating the work in shorthand with that of other subjects either through dictation material or through actual, practical work, such as will later be explained, a broad knowledge of business forms and practices can be given In the constantly changing relations between pupil and pupil, and pupil and teacher, and in the carrying out of classroom tasks by the pupils, many opportunities for the cultivation of habits of initiative, honor, self-reliance, co-operation, etc., are offered.

How Aims are Worked Out.

As a special aim the teacher's efforts should be directed towards having his pupils acquire a thorough knowledge of the theory of shorthand so that they may be able to write a well-executed, readable outline for any unfamiliar word in the language employing the principles of the system and not relying upon guesswork. There should be developed an automatic control of the grammalogs and contractions, the importance of which can be seen when it is known that these words make up

Special Aim.

from fifty to seventy per cent. of all commercial dictation, and from forty to sixty per cent. of literary matter. The ability to phrase judiciously, to read with facility what has been written, to sustain a given rate of speed for a reasonable length of time, not merely for five minutes, which is the usual test, and to turn in a well-spelled, correctly punctuated, neatly arranged transcript; these are the things that will constitute the special aim of the shorthand teacher.

CHAPTER III

MATTERS OF ROUTINE IN A SHORTHAND CLASS

In every lesson in shorthand there are bound to appear certain matters necessary to the operation of the class which, unless they are provided for by the teacher when he plans his work, will waste much of his time and seriously impair the efficiency of his instruction. These are routine matters such as the collection and distribution of paper, condition of the boards, collection and checking of exercises, marking attendance, writing the homework on the board, arrangement of work, and many other little details which, unless they are handled in some organized way, consume valuable time and require daily attention. Most of these matters present themselves the very first day that the teacher meets his class, and it would be well for him to have ready his plan for taking care of them from the start.

One thing is certain. Nothing can justify the teacher in wasting precious time over such matters.

Fundamental Principles. An opportunity is presented here that it would be unpardonable for any teacher of shorthand to neglect. Bearing in mind the ultimate aim of education, social efficiency, vocational efficiency, and the particular aim of his own instruction, he will readily see that these matters should be placed in the hands of

the students through an organized routine that is operative on the principles of social service and vocational efficiency. It would be a grave mistake to enlist the aid of the students in doing these things on any but the proper principles. The teacher who makes a personal matter of these things and has them attended to by students as a matter of personal accommodation probably wastes less time than the one who does them himself, but more injury is done to the characters of the students in that it may eventually develop a vicious "toadyism." From the aspect of vocational efficiency for a teacher to disregard the opportunity presented by these routine matters would be making open display of his lack of executive ability and much inspiration to the class is lost.

Social Service.

The proper course to pursue is to face the situation with frankness. The classroom is a miniature social and business community of which every pupil is a member; a self-regulating community operated on the principles of democracy with the teacher as the leader and counsellor. The students should be taken fully into confidence of the instructor, and they should share responsibility with him for the solution of the problems that arise in class. It can easily be shown to the class that each of the routine matters is a "community affair," and that it is the concern of all; therefore the one who attends to it efficiently serves, not so

much the teacher, but his class-mates and himself, for he receives service of a similar kind from another. It will be seen, therefore, how the ideal of social service may be utilized. As a business community the students can be brought to realize the importance of reliability in the performance of any task carrying responsibility, and once entrusted with it, they are judged competent or incompetent by the class according as their work is satisfactory or unsatisfactory.

So much for the fundamental principles involved. Now to get at the details of the organization. The distribution of paper always offers a problem in a shorthand class where the students are not supposed to furnish it from their personal supply. The use of note-books does not eliminate the problem. Most teachers conduct a drill at the beginning of the lesson, and if the papers are to be inspected they must be collected, whereas note-books would have to be returned immediately to continue work with the class. There are two plans for distributing paper, neither one of which should require the teacher's attention for an instant. The first is to give a weekly supply to a boy or girl who can reach the classroom before the others are all assembled, and who will look after the distribution. It may be that the one in charge of the paper could not get it all distributed by the time work should have started; then it is his or her duty to get help and an assistant is obtained by

Distribution of Paper.

her either through volunteering or through an assignment. A substitute is also appointed in case the regular attendant is absent. If there is no way in which the substitute can learn of the absence until it is too late to perform the duties of the position, there is a chance for some member of the class to show some initiative and fill the place without being directed. The other plan is to have the paper placed on the front desks and passed back on signal. The disadvantage of this plan is that it requires some attention, and the papers are given out after the entire class is assembled. In collecting papers the easiest method is to have them passed along to the front or rear of the room, or by those sitting at the front or rear of each row of seats. Unless actuated by some other purpose the teacher should never walk around the class collecting papers.

Blackboards.

The cleaning of the blackboards should also be taken care of by the students. There are many teachers who would hesitate a long time before they would suggest such a thing to a class because they fear the embarrassment of a refusal. Where such a condition exists, its proper adjustment is the most essential business of that teacher and further instruction in the subject is of secondary importance, for character-building takes precedence over the mastery of facts always. The proper thing to do is to look at the situation fairly with the class, examining it from all sides. Of course, an arbitrary command,

an appeal to higher authority, and a hasty threat of suspension might accomplish the desired result; but the educational opportunity would be thrown away and the matter would not be settled. The teacher with inspirational power, acting on sound general principles should be able to direct the sentiment of the class in the proper channel. There is an undoubted advantage in having the boards cleaned and ready for work as soon as the class begins. If the teacher has to erase the boards, and perhaps rule them, it will take two or three minutes during which the class may be idle; and for thirty scholars that would mean an aggregate of sixty or ninety minutes wasted. Provided the instruction is worth having, the class loses something by having the teacher so employed. If a student does it, the class does not suffer, for the teacher can be using the time to good advantage for the general benefit. Of course, it is not intended that every time during the lesson the board needs erasing that the teacher will stop until a student steps up and erases. Under such conditions the teacher could probably do the erasing more effectively without breaking the train of thought. But at the beginning of the lesson everything should be in readiness for work. Whose duty is it to clean the boards? It must be the duty of the teacher or of the student. Look at the matter from the student's point of view. Why should he refuse? Where a valid reason exists, he should certainly be excused; but where he acts in this

way to be disagreeable, he should feel the censure and condemnation of the class. If he feels that the service is menial, he must be led to see that the service is social; if the teacher is to do the work it can hardly be menial. The teacher who finds such a situation confronting him and succeeds in adjusting it, does more educational work than ten others who let the matter slide or side-step it, even though it takes considerable time.

If a student has been absent and the teacher requires the work to be made up; or if a student fails to bring in the work for any other reason, the teacher is often compelled to follow up the dilatory one. This compels his attention to a thing, the return from which does not justify the personal attention given to it by the teacher, if the matter can be taken care of in another way. The solution of such difficulties rests in having one of the reliable students of the class act as class secretary, whose duty it is to make a record in a book specially provided for the purpose of the daily assignment of work, and who keeps track of student records, such as the class average in various tests and the individual marks of students. When this record of the assignment is made it is possible then for a student who was absent to find out the work that should have been done for that day and to make it up without asking the teacher in class, or making a special call upon him after hours. It also furnishes a record of accomplishment for

Class Records.

the class, and if at any time the teacher is absent and the class is taken by a substitute, the secretary's record shows what has been done and just where the work should be continued. The recording of the class average in the care of the secretary can be used to stimulate the class to improve the average every time a test is given; it arouses emulation and gives each student an interest in the class as a whole, a working unit where the failure of one is the concern of all, and where those who fail, receive encouragement and assistance instead of jeers and pity.

Another officer of the class whose work helps to relieve the teacher is the one in charge of the written work to be done at home and handed in. This officer checks up the exercises when they are handed in to see that every student present has done the work, and also to note if it has been done in full so that when given to the teacher for inspection he has to judge only the quality. Those who fail to bring the exercise, or whose work is unsatisfactory for any reason, are required to make up the work, bring it to the teacher for examination, and then hand it to the exercise clerk, who makes a record crediting the work to the student. Unless an exercise is handed in at the proper time, the exercise clerk does not accept it without the signature of the teacher, which signifies that it is correct and satisfactory in every way. A weekly report from the exercise clerk brings to light those

Exercise Clerk.

who are making no effort to cover the lost ground, and the teacher is then able to spur them on.

In marking the attendance several plans are used in place of the old, time-wasting method of calling the roll aloud. In many school systems now the teacher is relieved from the investigation of a pupil's absence to determine whether it is excusable and the work is put in the hands of some one else who issues a certificate stating whether the excuse is valid or invalid. In marking attendance then the teacher is concerned with these two facts: a record of those who are present, and a satisfactory explanation of those who were previously absent. The attendance clerk handles the matter in this way. As soon as he arrives he takes possession of the roll-book, and at a convenient moment he makes his entries and then collects the absence excuses for countersignature by the teacher. The convenient moment, however, does not mean when the teacher is in the midst of an important explanation or when it will interfere with the work of the class.

Attendance.

The attendance can also be recorded from the exercises, provided each pupil present is compelled to hand in the exercise or a written reason for failure to do so. It would, of course, be possible for one student present to hand in the exercise of a student who is absent for the purpose of obtaining attendance credit for the absentee, but it is not

Attendance Marked from Exercises.

likely, as other provision is made for such exercises and it would direct suspicion at such a student.

Another common way of marking attendance is by the use of a seating plan of the class. The students are all assigned seats which they are to occupy at every session. By consulting the plan it can readily be determined who are the absentees, for their names would appear in the space used in the plan to designate the seat.

By Seating Plan.

It is the practice of many teachers to have the home-work assigned, corrected from the exercise as it is placed on the blackboard. If the teacher has to do this work it will take ten to fifteen minutes of his time that could be more usefully employed in helping individuals who need his aid; those whose work show that they have not fully grasped the principle in question. By training a student to do this work the teacher can be free to give his valuable assistance. By selecting a student who will suffer the least through the loss of the work done at the beginning of the lesson, economy of time and effort is effected. The student also derives advantage from the work, for in a short time improvement in execution and in knowledge of principles is invariably the result. For this reason it might be just as well to arrange that several members of the class be given the same opportunity.

Correction of Home-work.

Since the installation of automatic ventilation systems, the question of keeping the room supplied

with fresh air and at the proper temperature has been considerably lessened; but where these systems have not been installed or where their successful operation is spasmodic, as has been the case in some instances, it falls to the teacher to assume the responsibility. The matter of light, heat and ventilation is another routine matter that should be taken care of by the students. Some teachers have a pupil in each class whose duty it is to raise the windows at the end of the period and close them at the beginning. In this way the room is flushed after occupation by each class, and the one in charge enters the room to find the windows up. He immediately sets about to arrange them according to the directions that have been given, the shades are attended to and the ventilation is no more thought of until a complaint is received, when the matter is properly adjusted by the one in charge.

Ventilation.

Another way in which economy of time and effort can be effected is through the standardization of procedure as to the places to be used when pupils go to the board, the arrangement of work on the boards, in the exercises or on paper. Some one way should be adopted and always adhered to, so that it is not necessary to spend time in directing how the work should be arranged. In some cases teachers have used more time in explaining the plan of arrangement than in the dictation exercise itself. This idea of standard arrangement is well applied in other branches where written work is

required, such as in compositions or mathematical solutions. Thus, for instance, whenever words are dictated it might be that the teacher would find it convenient to have them always appear in a certain number of columns consisting of a definite number of words, with the name, date, and designation of the class always appearing in the same relative place. The plan is certainly better than to find the name of the student on the right in one case, on the left in another, and some other place for the next; or to have the words written in columns by one, in lines by another, and so on. Whatever plan for work is adopted for the boards or for paper, it should be standardized. When sentences are to be written some teachers find it an advantage to have a line skipped after each line of writing so that errors may be indicated upon it or so that corrections may be practised.

Arrangement of Work.

Another method that can be standardized is the way in which tests are taken by the class. Tests in elementary shorthand, for instance, should include certain fundamentals such as grammalogs, phrases, statements of rules, application of principles, or both. Special test paper with suitable ruling into sections could be utilized for this purpose, and it would not take more than a minute to get ready for the test, whereas, if the ordinary paper is used, it has to be ruled and numbered in accordance with directions, using up from ten to fifteen valuable

Tests.

minutes. When the form has been decided upon, the mimeograph will enable the teacher in a few minutes to print all he needs for the term. Again, if the grammalogs are tested upon with a time element involved, as many teachers believe they should be, inasmuch as there is no reason why they should not be automatic from the beginning, the same conditions should always hold; the time element may be changed to accommodate the fuller mastery of the grammalogs, but it should always be a part of the test. In the same way the other elements of the test should be standardized.

In the advanced shorthand classes it is frequently possible for the teacher, by the use of the metronome, to have the assistance of substitute dictators. It is a big advantage to a teacher if he can be free to go about the room observing the work of the pupils, sitting down beside the more backward and studying their individual obstacles to the acquirement of speed. It is in this way that the most efficient work is done. When the teacher has to dictate and try to observe the writing of the pupils, neither the dictation nor the writing operation can receive his attention to a satisfactory degree, and the study of the notes after they are taken, while it has value, does not compare with seeing them taken. Therefore, the teacher must have one of his students who can set the metronome beating at the required speed and every student in the class should be taught to read with it so that the distribution of the work

will be fair. The knack of reading with a metronome is difficult at first, but after a little practice the difficulty disappears and the students are able to supplant the staccato, jerky style of the beginner with a free, fluent style, giving sufficient attention to the phrasing and other details. While the metronome is useful as an artificial device for regulating speed in reading, there are certain objections to it, and a teacher should not use it to regulate his speed while dictating. It is only because the advantages of its use greatly counterbalance the disagreeable factors that it is recommended and used. It is not an easy matter to read at a measured rate, and to teach several students to do this without such an artificial aid would require considerable effort.

Substitute Dictators.

At first glance the number of these routine matters may lead a person to think that emphasis is misplaced; that the organization of them must be such that in order that the teacher may attend to it, neglect of his teaching work must inevitably result. But it must be borne in mind that it takes longer to describe the operation of a system than it does for the system to operate; that these are all important classroom matters that must be attended to, that cannot ordinarily be eliminated, and that some one must look after them, either the teacher or the student; and that it is better for one student to sacrifice a minute or two

Danger from Too Much System.

performing a simple task than that the whole class sacrifice the minute or two while the teacher performs it.[1] Bagley says: "Sometimes, it is true, system and organization defeat their own purpose; they become ends in themselves, and thus tend to obscure the true ends for which they were established. When the true perspective of means to ends is lost to view, the means naturally become magnified in importance, and the result is 'red tape' with all of its attendant evils." Just as soon as the system of taking care of these routine matters interferes with the instruction; just as soon as the teacher finds his work stopped and he has to push the system off the track, he knows that his system is not effective, and that it is reducing the efficiency of his work instead of increasing it. When it is necessary for a teacher, day after day, to call attention to the system, to remind the students of it time after time, there is something radically wrong with it. So far as the teacher is concerned, the system should be inaugurated the very first day he meets the class, watched closely for a short time until the routine has become a habit, and then it should be forgotten. Whenever it intrudes upon his consciousness there is something wrong, some weak point in his organization. To an observer in the class the only way in which the system is apparent is in the utilization by the teacher in an effective way of every minute of the instruction period, and the

[1] *Classroom Management*, p. 13.

smoothness with which the mechanical details are disposed of without interfering with the work of instruction.

In every system the one who carries the ultimate responsibility must check up the work of the others, and so it is here. To keep his machinery well oiled and working smoothly it will be necessary to check up the work of the various students who are entrusted with the different details; he will take occasion at times to commend them for conscientious and efficient work, and receive with enthusiasm any good suggestion bearing upon the work of the various students.

Checking.

In the operation of such a system the teacher has an excellent opportunity to develop in the students the characteristics that make for success in after life. Qualities of initiative, honesty, reliability, and the ability to work in harmonious co-operation with others are all fruitfully employed, and the student acquires the correct attitude towards work and the power of accepting responsibility, things which are not by any means negligible factors in any scheme of education.

CHAPTER IV

TEACHING DEVICES

MOST teachers use certain special devices of a mechanical nature that serve to economize labor and time in the work of instruction, and a description of some of the common ones may serve as a suggestion to those who are not acquainted with them. Among the various devices in use may be mentioned drill charts, rubber stamps, ruled blackboards, hand-punch, stop-watch, metronome, newspapers, exercise charts, alphabetical lists, and test sheets. It may be interesting to see how these things can be used to facilitate the work in the classroom.

Alphabetic Lists.

It is a good idea for a teacher, as soon as the roll of the class is complete, to make out the alphabetical list and have it mimeographed so that one will be available on each of the many occasions he has to check up work to be handed in by the students. Usually this is done by using the roll-book, but the teacher dislikes to make unnecessary marks in this book of record that might possibly interfere with the attendance record; again, the checking up may be handed over to some one else to do, and it is easier to hand an alphabetical list along with the work and retain possession of the roll-book. Let the teacher think how many times during each term the list of students has to be written

out for one purpose or another, and he will see an immense advantage in supplying himself with a hundred or so of these lists, which can be done in a very short space of time and with little or no effort.

Rubber Stamps.

It is desirable in all cases to express the teacher's opinion on the work of the student, and when this work is returned to him, he must see at a glance that he has done well or ill. It is a great waste of time for the teacher to write his opinion of the work on each paper, so many teachers have adopted a set of words that expresses their estimate of the work, and these have been put into rubber stamps. Such stamps consisting of the name of the teacher and the words "Excellent," "Fair," "Satisfactory," "Unsatisfactory," "Re-write," etc., can be made with little expense and their use saves a lot of time. However, it is possible to make one stamp serve the purpose nicely, and this can be done by adopting one with a general term applicable to all sorts of work, such, for example, as "Approved." The withholding of this approval may be used to indicate the unsatisfactory nature of the work or possibly the necessity for re-writing it.

Test Sheets.

Another time-saving device is the use of special test sheets ruled in accordance with the requirements of the test. This ruling may vary to suit the ideas of the individual teacher, but there can be no doubt, no matter what form he adopts, the use of these

sheets will save much time. Below is given a suggested arrangement.

TEST SHEET.

(*Name.*) (*Date.*)

No.	Word in Short-hand.	Correc-tions.	Word in Short-hand.	Correc-tions.	Gram-malogs.	Phrases.
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

It will be noted that the left column is used for the numbers, and it is not necessary to number the other columns as in order to determine the number of a word in the second column it is only necessary to add twenty or whatever number appears in the first column. It is usual with some teachers to give the corrections to the student when the papers are returned, hence the extra column for corrections; for those who do not favor such a course, the correction column could be omitted, or it could be used by the student when the correction is made. In the same way the number of grammalogs may be increased or diminished. Where the teacher offers dictation as part of the test the lower part of the sheet could be left for that purpose, and if it is usual for the pupil to furnish a statement of rules, this could be done on the back. The form of the sheet and its individual variations are of little importance; what is of importance is the use of some form which will enable the class to start the test as soon as the paper is given out.

Stop-Watch.

The use of a stop-watch saves many a half-minute in the speed class. Its use renders it unnecessary to wait until the second-hand reaches the sixty mark before beginning the dictation, as is so often the case when the ordinary watch is used. Neither is it so hard to keep track of the minutes and seconds that expire if they appear in a way that is specially provided for that purpose. It is quite

true that such watches are not distributed by Boards of Education or by private school managers, but it is also true that they can be obtained for less than ten dollars, and their use will easily repay the teacher in a short time for the outlay.

Drill Charts.

Some shorthand teachers use, with success, a drill chart for the purpose of testing the automatic control the student has gained of the grammalogs, phrases, or the words in a given prepared selection. The drill is conducted by inserting the words in the spaces of the chart in any order and raising the speed each time they are dictated, the dictator being at liberty to change the sequence of the words each time he reads, and yet being able always to get the proper sequence after reading by remembering what paths he took around the chart. When the student is called to read back what he has taken, the teacher is then able to check the reading. It will be noted that the reader may start at the upper left-hand corner and read horizontally from left to right, or for the second reading he may start at the same place and read vertically; or he may start at the upper right-hand corner and read horizontally or vertically, and so forth. With this chart the reading may be varied in many ways, and the reading of the student can always be checked by simply remembering the plan of reading. On page 41 is given a drill chart.

It will be noted that in this small chart thirty-five words may be drilled upon until they become

Citizens of the United States	cherish	friendly	Atlantic	European
relating	seriously	hemisphere	necessity	connected
obvious	enlightened	system	impartial	political
matured	achieved	felicity	devoted	candor
amicable	in a position	provided	security	neutrality
adhered	competent	pursuit	insurgent	contention
discern	attributes	fervently	perpetuate	inaugural

automatic, that the chart may be enlarged to accommodate more or condensed for less, and that instead of words, grammalogs or phrases could be substituted. The teacher can have a number of these charts mimeographed and insert the material for drill at his convenience, or, better still, he may have his note-book ruled up for them.

Daily Record of Home-work.

In the previous chapter reference was made to checking the home-work of students. An exercise chart is used for this purpose containing the names of the students arranged alphabetically on horizontal lines which extend across the page. Immediately after the names a vertical line is drawn extending

from top to bottom; the rest of the page is ruled up with other vertical lines about one-eighth or one-quarter of an inch apart. These spaces following the individual names correspond to the dates upon which written work is due. When a student hands in his work, a check mark is placed in the square for that day; if he is present and fails to hand it in, a single line is made in the square opposite his name; when he brings in the work, he shows it to the teacher who stamps it, and then it is taken to the student who checks the exercises and the single line is crossed with another. In this way a clear record of the students' work is obtained without worry or fretting on the part of the teacher. At the end of the period when inspection of records is undertaken by the teacher, a student who was marked with a check every day did the work satisfactorily every day; three crosses would indicate that a student failed three times, but that he had made up the work, whereas three single strokes would indicate that he had failed three times and had not made up the work. By marking an "A" in the space when a student is absent, this chart could serve to record the attendance. The chart is given on page 43.

Ruled Boards.

It is unnecessary to dwell on the economy of time and effort brought about by having ruled blackboards, yet obvious as is the fact, many teachers find that they have to work with boards that have to be continually

Names of Students.	September.									
	8	9	10	11	12	15	16	17	18	19
Abbott, Chas. ..	✓	✓	×	/	✓	✓	×	/	✓	✓
Burns, James ..	✓	/	/	/	/	✓	×	/	/	/
Collins, James ..	✓	×	✓	✓	×	×	×	×	×	×

ruled. This results either in a great loss of time or in the acquirement by the pupils of slovenly habits of writing. The teacher who is handicapped by having to work with boards that are not permanently ruled should lose no time in urging his superiors to remedy the matter.

Hand Punch.

When exercises are done in a note-book some teachers are in the habit of examining the book, and then cancelling the pages by drawing lines down the center. The object seems to be to show that the work has been inspected, and to keep it from being offered

again on another occasion. For cancelling purposes there is nothing better than a hand-punch similar to the one conductors use in punching transfers. All the pages may be cancelled at once, and the neat appearance of the pages is not marred.

Newspapers.

Some teachers see a big advantage in making use of newspapers as a teaching device. In the speed class, fresh, interesting material can often be found, and the work seems to have a practical spontaneous turn to it that is sometimes lacking in the dictation taken from a text-book. By a judicious selection of newspapers and discrimination in the choice of the contributor much of current events can be learned by the class. However, if this discrimination is not shown much harm may be done.

Metronome.

The use of a metronome in a speed class for dictation purposes and in an elementary class for reading purposes is something of a mooted question. Many teachers object to it for dictation on the ground that it produces a monotonous tone, that the ticking of it disturbs the concentration of the student and interferes with his hearing, that proper phrasing is not possible, and lastly, that it is not practical in that dictation is never given in a business office in anything like the measured rhythm of the metronome. These are serious objections, and they all have their weight, but a teacher who has

them in mind can very easily accustom himself to the use of the machine so as to overcome most of them. A monotone is not essential nor a necessary consequence of such dictation. The first few times the metronome is used in a class it invariably upsets the students, but after a little practice with it they do not mind it, and classes have been known to express a preference for it. If the teacher will have a little patience in practising with it, the ability to phrase will gradually be developed; all that is necessary is to keep track of the ticks, and when two or more words are run together make the proper allowance for them, and when the number of ticks have been given, continue. The objection that it is not practical because it is different from office dictation could also be made against all measured dictation so that it is no stronger here than against reading any selection at a measured rate. Since the objections raised to the use of the metronome do not necessarily result, and since its use can be advantageous to the instructor in that it permits him to observe the actual operations of the student taking notes while a substitute dictator is reading, the restricted use of it is recommended. By restricted use is meant the use by the scholars; but there seems to exist no reason why the teacher should need it as an aid in dictating at a measured rate, unless it is the fact that it renders unnecessary the counting off of the words in a selection. But

a teacher with his work prepared will never need this assistance.

These devices are the result of some teachers' experience, and they are described here rather in the hope of suggestion than as indispensable factors in the work.

CHAPTER V

ELEMENTS IN THE RECITATION

In considering the shorthand recitation in this chapter the word recitation will not be restricted to its etymological meaning which would be confined simply to reproducing what has been previously learned; but it will be used with that broader significance which refers to all the work done in a shorthand class during the time commonly designated as a "period."

Variety of Recitation.

The form of the recitation and the elements entering into it are influenced by the character of the subject matter, and by the special purpose underlying the recitation. Thus the recitation in an elocution class will be different from that in an art class in certain essential respects; that in a history class will differ from that in a typewriting class, but will probably resemble the recitation of an English class. This is due to the fact that the subjects are different in character, that a different kind of response is required. Some subjects are primarily thought developing, those which accustom the student to the logical processes of analysis, synthesis, and judgment; others are fact-giving, those in which a series of facts, more or less intimately related to life, are presented; yet others are primarily for the development of certain

standards of taste, those which give the data for the determination of æsthetic values; and yet others are chiefly skill-developing and habit-forming, those in which the power of accuracy and speed in execution are the main desiderata. It is not contended that any subject in the curriculum is exclusively as described but that such is its principal aim. There is no doubt that shorthand belongs in the skill-developing class of subjects.

Purpose in Recitation.

Again, the recitation will be affected by the specific purpose which the teacher has in mind, and which he hopes to accomplish through the recitation. This gives rise to emphasis being distributed; at one time appearing on one phase and at another on a different phase until the recitation at one time is merely a drill period, and at another an instruction period. It is impossible to determine the effectiveness of method until the purpose underlying the recitation as a whole is known.

Elements of Recitation.

As the nature of the subject determines the character of the recitation, and as the problems in an elementary shorthand class are somewhat different from those in the advance and speed class, the recitation elements in each will be considered separately. In almost every shorthand recitation in a theory class there are four elements: (*a*) drill; (*b*) reproduction; (*c*) instruction, and (*d*) assignment. The drill is provided for those factors which should be made automatic from the very beginning, such as

the grammalogs, contractions, and the more common of the phonographic phrases. Reproduction is the process through which the student is given the opportunity to recall the principles he has learned and in which he displays his ability to apply them. Instruction is the operation through which the teacher presents the new principles for acquisition. The assignment is the work given by the teacher to the class through which the students are led to further study and the application of the new knowledge. Unless some special demand occasions it, every lesson in shorthand should have all of these elements.

Drill.

The points to be kept in mind in considering the elements of drill are its place in the recitation, the time used, the subject matter, and lastly, the details of conducting the drill, which must follow the principles of habit formation.

Place.

The place in the recitation to conduct the drill is at the beginning. There are two good reasons for this: first, the problem of holding the attention in a drill exercise after the first minute or two is more difficult than it is if the drill is placed at the beginning when the pupils are mentally fresh and they are better able to sustain the attention; second, the drill furnishes an excellent method of getting the class into active operation without the loss of a moment. It demands that the entire class be ready, and not merely the one individual who is to recite first.

Just as soon as the teacher steps inside the classroom the drill should be started, and in a second the entire class has settled down to work; no calling to order, no tapping on the desk, no recitation going on with half the class attentive. It has another advantage in that it starts the lesson off briskly and injects into it what the baseball enthusiast calls "ginger," stimulating the minds to rapid thought and setting a good pace from the start.

Length.

The time required for a drill exercise will vary according to the amount of material in it, the preparedness of the class, and other special conditions, but it is safe to say that it should never be extended over ten minutes, and very seldom that long. Care must be taken that the drill does not become monotonous by being too long, for then the good results otherwise obtained are lost. Drills that are well organized, where there is complete understanding between the teacher and class as to what is expected of each, will take less time than where the class has no such definite understanding.

Material.

While every element of the shorthand theory can be utilized for drill purposes, yet those factors which by their very nature presuppose the absence of reflection, are the principal material for the shorthand drill: grammalogs, contractions, and phrases. It is possible to conduct a drill on any particular principle, or set of principles, by constant repetition succeeded

by application, but the things for which the drill in shorthand are most essential are the ones enumerated above.

Before considering the way in which a drill should be organized and conducted, it is necessary first to examine carefully the laws of habit formation and see which ones are applicable to the shorthand drill. It would seem that the first one that has any bearing on the subject is the law of motivation.[1] "A motive must be provided for the work. The stronger this incentive, the greater will be the attention given to the work in hand and the sooner will the desired result be secured. Very much of the drill work which is done is well-nigh futile because it is imposed upon children. They do not see its significance, and feel little interest in the accomplishment of the results demanded." This is another instance when the instructor should take the class into his confidence; it should not be a difficult matter, for instance, to show the necessity for a ready knowledge of the grammalogs or contractions, because ignorance of them brings about a feeling of such utter helplessness that the need of earnest study and mastery of them is daily brought home to the students. If this is the case, why, it may be asked, do teachers find it difficult to have the class learn the grammalogs, etc.? The answer is that where the pupils have

Motivation.

[1] Strayer's *A Brief Course in the Teaching Process*, p. 42.

the motive, the teacher must have failed to organize his drill properly, that certain other elements necessary to the success of the class have been neglected.

The second law of habit formation operating in the shorthand drill is that of focalization.[1] It is stated as follows : " Processes that are to be made habitual or automatic must first be focalized." With this law in mind in arranging a grammalog drill, we should first strive to strip the grammalogs of their arbitrary character by explaining the plan operating through them ; by showing some logical connection between them and by offering some means of effective association. A careful analysis of the grammalogs in Pitmanic shorthand will repay the teacher by giving him a more intelligent appreciation of the plan running through them than is gained by simply accepting them as they are presented in the text-books. In at least three-quarters of the cases the grammalogs are what is known as " regular," those containing all the consonants in the word and occupying the position indicated for the word by the vowel. The irregular ones are of three kinds : those which do not contain all the consonants in the word, such as *principle ;* those which violate the principles of theory for convenience in writing, such as *are, our, could ;* and those which are written out of their proper position to avoid clashing with some other grammalog, or to leave

Focalization.

[1] Bagley's *Educative Process*, p. 122.

the second position for another which receives preference on account of frequency, such as *go, be, it.*[1] ("All About the Grammalogs—More About the Grammalogs.") The contractions may be classified in a similar way. When the teacher is able to explain some of the apparent inconsistencies, when the plan is shown to the class, focalization is secured and each recall thereafter is easier. This is in accordance with the principle of habit formation laid down by Professor Thorndike, who says:[2] "Where possible, present the element by itself before presenting the gross total situations in which it inheres." The grammalogs themselves should be considered and practised before presenting them in dictation, which in this case corresponds to the gross total situation in which they inhere.

Repetition.

The next law to be considered is the law of repetition. Many teachers make the mistake of thinking that repetition is drill and *vice versa*, and their chagrin is great when they find that after inflicting endless repetitions on the class, there is not the slightest improvement. Repetition is certainly necessary, but it must be repetition with attention, with the material of the drill brought into the focus of consciousness and kept there. In attempting to make a series of grammalogs automatic it is obvious that the more frequent the operation is performed

[1] *Phonographic Monthly*, Vol. 9, 1905.
[2] *Education*, p. 175.

the more it tends to become automatized; therefore exercise on the series should be conducted daily until its elements are thoroughly mastered. Once automatic control has been obtained, the periods elapsing between drills may gradually be lengthened. When a new series is taken up, the old should not be dropped altogether but drill should be given upon it every second, then every third, fourth day, etc., until the periods extend to a week or two weeks.

Holding Attention.

Another question which arises in connection with this repetition work is the holding of the attention. One of the biggest factors in obtaining this result is the way in which the drill is conducted. If the grammalogs are to be dictated, they may be read in two ways: (1) in a related series, as *by, be, to be; at, it, out;* or they may be arranged promiscuously. If the former system is used, the pupils very quickly learn the sequence and attention from that time on is unnecessary; the first word gives the series, and the others are written without thought, and if the dictator omitted them, frequently they would be written anyhow. This system, while it does eventually result in the pupils learning the grammalogs, yet requires many times the repetition practice, and it is not as lasting nor dependable. The promiscuous reading of the grammalogs can very easily be taken care of by using the drill chart explained in Chapter IV, page 40. When they are read in this way the

student cannot supply the missing word from the series, but he must depend altogether upon what he has taken down in his notes. Another way in which the drill can be made interesting is through variation in the way in which it is conducted. One day the words could be dictated as explained; the next day the drill chart could be placed on the board and the class could read the words in the order indicated by the teacher; other variations could be devised such as taking a shorthand exercise containing the grammalogs and setting a time-limit on the reading.

Accuracy.

The last point bearing upon drill is the necessity of getting things correct the first time. "Our nervous system is so constructed that to do anything once leaves a tendency to do the same thing the same way when next we are placed in a similar situation."[1] This shows the necessity for close observation in the initial stages of the practice to see that accurate forms are made. The motto here, as in everything else stenographic, is "Accuracy first, speed later."

Reproduction.

Reproduction is the second element in a shorthand recitation. In every lesson there should be given to the student the opportunity to recall and reproduce, preferably in his own words, the ideas he has gained from previous instruction. In doing this

[1] Strayer's *A Brief Course in the Teaching Process*, p. 46.

he has the chance to show that it is clearly understood and an apperceptive basis for the new instruction is established. This reproduction may take one of several different forms, depending in a measure upon the nature of the assignment. The three commonest forms of reproduction are (1) by question and answer; (2) by topical outline; and (3) by application. The reproduction may be oral or written. In the shorthand class by far the commonest of the three is reproduction by written application. This is what is generally understood as "homework" in which the teacher assigns a certain exercise to be written in shorthand or transcribed into longhand because it requires the application of certain principles previously learned. Application is the touchstone of theory, but the teacher who confines the reproduction to this method alone is losing many opportunities and making his own work doubly hard.

Question and Answer.

Reproduction by question and answer is the process in which the teacher, by a series of well-formed questions, elicits the information he desires and shows the relation existing between the several rules or principles. It does not mean the mass of isolated questions designed merely to puzzle the student. It may take the form of a request for the statement of a principle, of an illustrative word, or a word may be given and the student may be asked to state the problem involved. This last form is one of the most effective in that it compels the

student to analyse the word to find the problem and then make a conscious application of the principle. In Pitmanic shorthand the word *pause* has only one outline problem, the proper use of the circle representing " s," and if the student can find the problem or several problems in the word, he is taking the first effective step in the application of the principles used to represent the word.

Topical Outline.

Reproduction by topical outline signifies that the student has a comprehension of the lesson as a whole, and has control enough of it to reproduce the author's scheme without using the language of the text. A statement of the rule is made followed by its application in some cases other than those given as illustrative words in the text. An orderly, systematic presentation of the lesson is made with due regard for its logical development. Expedients are added to different kinds of strokes in different ways ; the expedient is first considered with regard to straight strokes, then to curves, then to special characters as in the lesson on initial or final hooks, or it may be, that the strokes may affect the expedient through another classification, such as light, heavy, finally hooked, etc., as in the case of the halving principle. A pupil who can stand before the class and show this comprehensive grasp of the theory as it relates to each expedient is not at all likely to make mistakes in the application.

In the use of reproduction by application, the

severest test is given, it is true, but since the work is not done under the immediate supervision of the teacher, it is likely to be unreliable as there is always present the possibility of "copying" and passing off as the student's own work, an exercise that has been copied from some one else. So that it is wise to supplement this method of reproduction by some other that will serve as a check. At the same time it will be seen that this method combines the harmonious co-operation of mind and hand which is so essential in shorthand practice, and this is the reason for its extended use. Each of these methods has its value and the possibilities of none should be ignored.

Application.

The third element of the shorthand recitation is that of instruction, but as this topic will be more fully treated in a later chapter, it will be passed over for the present.

The fourth and last element of the recitation is the assignment of work for the next period. It is frequently stated that the skill displayed in the assignment is the test of a teacher's ability. One thing is certain: the teacher who neglects the possibilities of an intelligent assignment cannot long count upon having adequate preparation of work. The brief, purposeless assignment, "Take the next exercise," is the mark of the inefficient teacher; the students see no relation between the classwork and that to be done at home; they probably take it as just about what it is, one of the necessary

Assignment.

evils with which it is customary to inflict upon students.

The assignment is very closely related to the character of the reproduction work expected by the teacher in the following session. It may call for the ability to state correctly the rules governing the use of a certain shorthand principle, it may consist of answering certain questions which will serve to bring out the analogies or contrasts of the present lesson with what they have previously learned, or the teacher may give a full explanation of the lesson in class and then assign an exercise to be worked out in shorthand to test the application of the principles. Better still, there may be a combination of these different assignments. Many teachers do not make use of the study assignments because they assume that the student is unable to understand the lesson without a special explanation. When the pupil is continually meeting this assumption, he gradually loses the initiative in study and the condition becomes real. Many people have learned shorthand without the aid of a teacher and with our improved text-books, the student should be encouraged to make an effort on his own account. He should be encouraged to independent study.

Variety of Assignment.

In the assignment care must be taken not to encroach on too much of the student's time. The instructor should have accurate knowledge of how long it will take for the slowest student in his class to do the

Time Demanded.

work and be sure to set it within reasonable bounds. It seems to be the general opinion that all the preparation demanded by the assignment should take no longer than the length of the period spent in class.

Such are the elements of the recitation in an elementary shorthand class. The principles that have been established apply in the same way to the work of a speed class, but the material is different. In the chapter describing the method of conducting a speed class it will be seen how these principles operate.

CHAPTER VI

LESSON TYPES IN SHORTHAND

In the last chapter it was pointed out that there were four elements in every shorthand recitation: drill, reproduction, instruction, and assignment. Three of these, the first, second and fourth, were discussed at length; it is the purpose of this chapter to outline the ways in which a teacher of shorthand may present the theory of the subject to his class. Before any practice can be had on any principle it is necessary that the student have a clear understanding of such principle and of the conditions under which the principle correctly operates.

Nature of Problem in Shorthand.

The problem confronting the shorthand teacher who has to instruct the pupil how and when to write the circle to represent "s" in Pitmanic shorthand, is no different from the one before the teacher of geometry who has to instruct the pupil that the opposite angles of two intersecting straight lines are equal; or that before the teacher of algebra who wishes his class to learn to factor $(a^2 - b^2)$, or the teacher of French who wishes the class to learn the use of the contraction "du." The method followed for habituation may differ in some respects, but in the original presentation of the idea, all the problems are alike, and methods which are employed with one may be employed with all.

Instruction in shorthand proceeds in accordance with the principles of one of two methods: the direct, or by some alluded to as the deductive, and the indirect, or inductive. Either of these methods is generally chosen for presenting a new principle; each has its advantages and disadvantages, and as is most natural, each has its enthusiastic followers as well as its harsh critics. There are other methods used in the shorthand classes such as the analytic, the method of re-organization, review, etc., but these are considered special methods used for a different purpose.

Two Methods.

For the purpose of this book, the terms "direct" and "indirect" will be used in referring to the two general methods. In the direct method the teacher explains the principle while the class listens, absorbs, and applies; he works from the general principle to its application in particular instances; he tells them everything about the lesson so that at the end of the lesson every rule has been explained and practised upon. In the indirect method, the teacher tells as little as possible, but by well-chosen examples of the principle in particular instances, he leads the class to note the resemblances and differences in each outline, eventually getting the class to generalize from what they have observed.

Direct and Indirect.

The direct method of instruction in shorthand may be divided into four steps: (*a*) organization

of words containing use of principle ; (*b*) statement of principle ; (*c*) application ; (*d*) verification.

Steps in Direct Method.

The steps given here are practically self-explanatory, but to remove doubt each will be defined. In the first step of organization the teacher selects words illustrative of the various rules to be learned and arranges them in groups. These groups are then presented as problems to be worked out in shorthand. The second step in the process is then reached. By the statement of principle is meant the giving of the rule or principle to be taught, the conditions under which the rule is operative. The step of application means that as soon as sufficient explanation has been given by the teacher, he will immediately call upon the class for its application to words not previously used ; in reality the step of application is a test of the pupil's power to apply the rule. Verification is the process by which the pupil's work in application is proved correct or incorrect, in the former case giving him confidence in his understanding and his power to apply what he has just learned, and in the latter offering him the opportunity to correct any misconception that may have existed in his mind in regard to the operation of the principle.

In teaching the lesson on the uses of the "s" circle in Pitmanic shorthand, the first thing to be done by the teacher is to select type words for each phase of the principle and write them in

groups on the board. The statement of the principle would be that "a small circle at the beginning of the stroke represents "s" and at the middle or the end of a word it represents "s" or "z" and that it is written inside of curves, with the "zero" motion on straight strokes, and outside of angles. Or, it may be stated in any other way that the teacher prefers. Some prefer to state that the circle is written on the right of downstrokes, left of upstrokes, inside curves, outside of angles, and inside the first of two curves, depending upon the antithetical elements to assist the memory. Before proceeding to application many teachers offer illustrations, although it is not a necessary part of the process at this point. Illustration of the principle means that the teacher would take each particular of the statement and show how it applies. Words illustrating these particulars could be then written on the board, and the way in which they affected the principle could be pointed out; thus in the word "pass" the circle must be added to a straight stroke, and that part of the principle which speaks of the "zero" motion applies; or in the other case, it is to be joined to a straight downstroke, therefore the circle is written on the right, and so on. In the application, the teacher dictates words embodying the principle in its various parts and the students try to recognize the problem contained in the word. As soon as the problem is

Illustration of Direct Method.

ascertained, the application of the principle is easy. After the words are dictated and the attempt at application is made by the student the teacher then adopts some method of verifying the work. He either writes the outlines on the board, or has a student do so. Opportunity is then given for a full discussion.

Steps in Indirect Method.

The indirect method is divided into five steps as follows: (*a*) review; (*b*) introduction; (*c*) examination; (*d*) organization; and (*e*) formulation. In the review the teacher brings before the class briefly any principles that are related to the new principle to be learned and the problem of the lesson is stated. In the introduction the teacher places his well-selected outlines illustrating the principle on the board for the attention of the pupils. Examination of the outlines is then made by the students and they proceed, with or without the help of the teacher to notice the analogies or differences in the examples until they are ready to make a classification and organize the outlines accordingly. As soon as the general idea is grasped, the formulation of the rule or principle can be made. It will be noted that in the direct method the statement of the principle comes first, whereas in the indirect method the principle comes last as a result of the observation and thought efforts of the student.

In the Pitmanic lesson on the circle " s " referred to above, the review would include remarks on

the necessity of abbreviating devices in shorthand, the frequency of the letter "s," and consideration of the letter "h," the only case in which the circle has been previously used. The problem then would be to see how "S" or "Z" is represented and how the expedient could be written in various cases. The step of introduction would require the words illustrating the different principles to be placed in groups on the blackboard, the number of groups corresponding to the number of particulars it is desired to develop in the organization. After studying the first group the class might *observe* that the sound "S" is always represented by a small circle; that it always appears inside a curve, and so on with the other phases of the principle. As soon as these things have been noted, the rule for writing the circle in each case can be established and formulated by the class. In this way, the students do the work and the teacher keeps in the background, just guiding and stimulating the thought where necessary. The class judges of the value of the individual contributions of the pupils and checks up statements by testing them out.

Example.

In considering the advantages of the direct method, the first that must be mentioned is the economy of time. It is certainly quicker to tell the student the principle than it is to develop it by a series of questions and answers; the information is all there, and it is put at the command of the student without delay.

Advantages.

Another advantage claimed for the direct method is that in enabling the teacher to give the principle immediately, more time is obtained for the more essential part of the lesson, the application of the principle. It is claimed also that giving the principle direct to the student, holds his attention and secures his interest, operations which are difficult if the principle is withheld from him and he can secure it only after many deviations.

Disadvantages.

The objections urged against the direct method are chiefly two : it assumes that what is told to the student is as well understood and as well remembered as what the student discovers for himself ; and it affords the student no opportunity to think for himself, all the thinking being done for him by the teacher, or taken from the text-book. These objections may properly be urged as advantages claimed for the indirect method, the users of which assume that thorough comprehension is the first requisite for making a process automatic ; that the time spent on developing the principle through the thought power of the student is justified in that the real work of education is to develop ability to think. They also claim that the time devoted to the instruction is not improperly divided by having the greater part of it spent on learning the principle and the lesser part given to practice, because the examination of the examples necessary to learn the principle is a sort of practice involving the application. It is claimed also that the indirect

method is most successful in holding the attention of the pupils, because it appeals to the student as something which has been accomplished as a result of his efforts, and the pleasurable satisfaction he feels encourages him in further effort. The chief objection raised against the use of the indirect method is that it wastes time in having the pupil take many minutes to find out what he could be told in one, that unimportant details are made the object of prolonged search and eventual discovery. There is no doubt but that this objection is valid where misplaced emphasis exists in the lesson.

However, all the disadvantages pointed out for each method are not inherent in the method itself; they are simply incidental to the use of the method by one who is not equipped to handle it. Not all teachers are capable of using the indirect method because they have not the power to organize knowledge in a systematic way, nor the ability to lead the thought of the class by skilful questioning. It must be borne in mind also that some lessons are more susceptible of direct treatment than others, and that one method used continuously in presenting work to a class is liable to become monotonous.

Other Methods.

The method of analysis is that in which the rules are dissected and the particular circumstances connected with them are brought before the student with special emphasis. The method of re-organization is that in which

the material of instruction is presented in a different form from that in the text; where the arrangement of the material is changed to fit a different plan of development, as, for instance, in changing the material in the lesson on the "shun" hook in the Pitmanic system so that it would be presented in accordance with the general principles of hand motion, vocalization, and balance. The present arrangement is based upon adding the hook to curves, simple straight strokes, hooked straight strokes, and the special cases of "k" and "g." The method of review would be the charting out of several principles for the purpose of showing the connection between each and the general logical development of the system. No teacher should be limited to the use of only one method. The best results will be obtained by the teacher who is equipped to modify his instruction and utilize any of the several plans.

CHAPTER VII

PLANS FOR INDIVIDUAL INSTRUCTION

It is the way of human nature when dissatisfaction is felt with a certain plan, for the pendulum of thought to swing to the opposite extreme. So it is with teachers who have used class instruction and have suffered a temporary set-back, results not being produced in accordance with their expectations; they immediately begin to consider the advantages of individual instruction. And so it is also with those who have found dissatisfaction with the individual plan; they swing to the class or group instruction plan. Individual instruction has been much advertised in connection with shorthand, and it may be interesting to see how the different plans are operated. With the question of the superiority of class or individual instruction, this chapter is not concerned; like most other things there is much to be said for and against each.

Types of Individual Instruction.

There are three types of individual instruction generally recognized: the business-school, the unit method, and the co-operative method. In the business schools where the teacher conducts the instruction on the individual plan it generally consists in the teacher calling to his desk the student whose work is to be examined, correcting

the exercise, explaining the new lesson, and giving directions for additional practice that will keep the student busy while the teacher is doing the same thing with the other members of the group. For the success of this plan it is necessary that the group handled by each teacher should not be large, as he would not have enough time adequately to examine the work or to explain new principles. Besides having a small number in the group it is also necessary that the system of promotion be flexible, that is, as soon as a student finishes a certain portion of the work, that student is promoted to a higher section immediately, for this is necessary to furnish the incentive to be actively employed while the teacher is attending to some one else.

Unit Method.

The unit method of instruction discards the use of the text and follows the lines of the work done by the correspondence schools. One section or unit of the work is done satisfactorily by the student before he can begin work on the next. In this way a large number of students can be handled because the instructor uses a key to each section which he hands to the student after the section is completed and the student corrects his exercise. The section containing the exercise to be done is given to the pupil immediately after the principle is explained and he sets to work at it. He works until it is completed and then he takes the completed exercise to the teacher for examination.

The teacher then gives him the key to the section just completed, and the student finds his errors and studies out the reason for his mistakes; when a satisfactory one cannot be found, the matter is set aside to be taken up later with the teacher. When the exercise has been checked, it is returned and the student is submitted to a further test to determine his grasp of the subject. And so it goes with the entire group, the students doing the work and checking it, and the teacher giving help to those who need it, inspecting the work in a general way and testing the pupil's ability to apply what he has learned. This test may be arranged to take place as soon as the work in each principle is finished by having a set of mimeographed test sheets, or by dictation on the blackboard, or the test may be periodic, say at the end of a week, and including certain principles in a group.

The third scheme of individual instruction in use is that called the co-operative plan. In this plan the teacher makes a consecutive arrangement of seats somewhat after

Co-operative Plan.

the plan on page 73.

In the first row, front seat, the scholar who is most likely to progress most rapidly is placed, the others ranging in consecutive order in back of him. The class is then considered as a group of pupils playing a game, and arrangements are made whereby those who do the most work satisfactorily are advanced to take the place of

5	6	15	16	25	26
4	7	14	17	24	27
3	8	13	18	23	28
2	9	12	19	22	29
1 0	10	11	20	21	30

others who fall behind. No pupil likes to yield up his seat, and the result is that the class is always working at its highest efficiency. The plan also enables the teacher to see at a glance what students are making poor progress, and he is in a position to investigate the cause and apply the remedy.

Tentative Arrangement.

A day or two after the class has been started this plan can be put into operation, and a tentative grading of the pupils is made. No harm is done if a student is misplaced, for the proper adjustment will be made automatically in a few days. Some teachers prefer to wait until they have had a chance to estimate the ability of the various members of the class, and to decide the matter by the standing in the first examination. As

soon as the grading is completed each member of the class is given two note-books which they are to use alternately, doing one exercise in the first, the next in the second, the third in the first, and so on. These note-books are then numbered one and two, and if they have not page numbers on them, they are paged. On the inside cover of each appears an index in which the student enters the work he does as soon as each step is finished.

Exercise.	Page.	Date Checked.	Date Approved.
1	3	1/2/13	1/3/13
3	5	1/2/13	1/3/13
5	8	1/3/13	
7	12		

NOTE-BOOK INDEX.

This index tells the teacher at a glance just what the student has done. It shows that exercises No. 1 and 3 have been written, corrected, practised satisfactorily, and approved by the instructor. It shows that exercise No. 5 has been written, and corrected,

Index.

but it has not been practised or approved. It also tells that exercise No. 7 has been written, but it has not been corrected. Entering an exercise in the index signifies that it is complete and ready for correction. The date in the next column means that the exercise has been corrected by some one else and that it has been practised. An entry in the last column indicates that the teacher has found the work satisfactory in every respect.

A few simple suggestions are all that is necessary now to set the plan in motion :

Suggestions.

1. All exercises should be corrected by the student immediately in advance of the one who does the exercise. The teacher corrects the exercise of the most advanced scholar, and of those who are most backward.

2. All exercises should be done in ink ; corrections in lead pencil or red ink.

3. When an exercise is given in shorthand in the text, both longhand and shorthand should be written by student ; when the exercise is in longhand in the text, only the shorthand should be written.

4. A few lines for later practice after the exercise is corrected should be left blank between each line of writing.

5. The name of student who corrects exercise should appear at the bottom of last page with the date.

6. Practice on each exercise should be finished

before the following exercise may be offered for correction.

7. Correction of the next student's work takes precedence over one's own progress work.

8. Students are penalized for the errors they fail to check.

If these suggestions are carried out the operation of the class will be automatic, and the teacher will find himself able to give attention to those who need it most. In every case there will be found one or two students who need practically no help whatever, and who can progress twice as fast as others who have not the same time to give to the subject, or the same interest in it. Such students will quickly be found under this plan of work, and their ability may be turned towards helping the others. The grading for a while will naturally be in groups, and the teacher will experience some busy sessions trying to inspect and approve all the work that is done in the first flush of enthusiasm, but if he keeps the standard of work high, and makes his inspection carefully, the student who sacrifices quality of the work to speed in progressing through the book will come a cropper. Gradually the work will become more diversified until hardly two are at the same place, but until this happens the teacher will have to work with the groups, using a leader in each, whose exercise is corrected by the instructor or by the leader of the next higher group.

Help from Students.

The students are able to correct each other's exercise because the one they are asked to correct has been corrected for them by some one else, and they can use this as a model just the same as a key. The corrections pass from the teacher to the leader or leaders, and then on down to the various members of the class as soon as they are ready for them. Each one has a corrected copy of each exercise done as far as he has completed the work. Thus, if student A wishes to have exercise 29 corrected, he passes it to student B, who has already had exercise 29 corrected and who has practised it over. Student B can then take his book, if necessary, and proceed to correct.

Ability to Correct.

By having the exercises done in ink and the corrections on them made in pencil, the teacher is enabled to tell at a glance from the number of mistakes whether the student has obtained a satisfactory knowledge of the principle or not, and to give him the needed explanation.

The suggestion compelling the student to practise his work before submitting the next exercise for correction is made to protect the one who is to correct his work, for one student could do enough work over night to keep the next student busy correcting this work and doing nothing else. But under this arrangement as soon as an exercise is corrected it must be filled in, and while this is being done the other student can be busy on his own book

Reason for Suggestions.

making up for the time he used in correcting. As soon as a student progresses beyond the one in front, they exchange places. The rule about the correction of the lower student's work taking precedence over the higher student's progress work is necessary to protect the lower student from being blocked by the refusal of the higher to correct his work. The lower student should receive the greater consideration. It must be borne in mind that co-operation is the basic principle of this plan, and if the teacher does not see that this co-operation is given, the plan is sure to fail.

Careless Work.

It is necessary to penalize students for failure to do conscientious checking of the exercises because they sometimes try to hurry through and get at their own work; but if they are held up by an error which they allow to escape unchecked and it is found by the teacher, they are likely to be more careful. There is no excuse for careless checking of exercises because each one has his own corrected note-book to which to refer. A tactful teacher can impose such penalties as will be taken in good part by the pupils, penalties that are regarded as part of the game.

While the class is thus absorbed in automatically progressing, the teacher uses his time first in making an inspection of the books, secondly in checking up the work done by those in the lower end of the class. As soon as the lesson starts, those who

wish to have work approved put one of their books on the teacher's desk retaining the other to work in or to correct from. The teacher runs his eye down the page and if no errors are found in the exercise, he stamps it with a rubber stamp "Approved." He finds which exercises are to be approved by consulting the index. The books are then returned to the student and the date of approval is entered in the index right away. If the other book is to be approved it is then handed in. If the teacher finds an error in the exercise, he looks at the bottom of the last page where he will find the name of the one who corrected it and an explanation should then be forthcoming from that person.

Teacher's Work.

Of course it is possible always for the teacher to modify the program, and at times he may decide to have a discussion on some principle which he has observed has given difficulty; or he may conduct a special drill on any phase of the work which needs it. There is no doubt that this plan of instruction should be supplemented by frequent tests, and it will readily be seen that those who do the practice work most thoughtfully are the ones who do the best in the test.

Modifications.

Each of these plans of individual instruction has certain things in common; all enable the teacher to get at the difficulties of the individual student, but they differ in the amount of work that is

left to the student. The business school plan has the advantage of the personal contact of student and teacher, and the benefit of the close supervision of work that is made possible, but it is limited to very small groups. The unit method is characterized by the sound idea of doing one thing well before attempting another; it makes the student search out his errors for himself, and it may be used to handle a much larger group than the first method. The co-operative method rests upon the assumption that the students have been taught how to study, for if such is not the case the work will become so confused by the number of mistakes that the plan becomes hopeless. Its success rests also upon the spirit of co-operation the teacher is enabled to develop in the students. The class can appreciate the advantage of the scheme in that it allows the student to go along as fast as his ability and the time at his disposal will permit. Care must be taken, however, that those who are not able to get into the front ranks of the class do not become the butt of ridicule for those who are further advanced. An altogether different spirit must prevail; one in which each feels a sort of responsibility for every member of the class accomplishing the work scheduled for the term. If the instructor is successful in inspiring his class with the proper spirit, there are few school exercises that possess greater educational value than this co-operative plan.

Discussion of Plans.

The worth of any plan of individual instruction may be judged by ascertaining in what proportion it embodies the following conditions, which may be used as criteria. Individual instruction should:

Criteria for Judging Plans.

1. Enable the teacher to give help when needed to each individual scholar. This signifies that the work must be so arranged that the student will not be helpless until the teacher becomes disengaged. The value of the assistance is increased when it is given just when needed, and it should be possible for the teacher to utilize others who can assist those who need help. He should have plenty of reserve force of this kind.

2. Render it possible for the teacher to give the greatest help to those who need it the most. In the organization of his plan a teacher might have it so arranged that the work done by the most advanced would require his attention for a great length of time and more frequently than the work done by the least advanced. This would serve to defeat one of the most important aims of individual instruction.

3. Keep all the pupils busy all the time on some profitable work. This indicates that there should be a strong incentive for diligent application, and that tasks which are set must be commensurate with the knowledge and ability of those who are expected to perform them.

4. Eliminate selfishness which is so likely to

develop under an individual plan. Its successful operation should not encourage the development of vicious tendencies but rather stimulate the formation of ideas of co-operation and helpfulness.

CHAPTER VIII

ESSENTIALS OF SHORTHAND SPEED

THAT teaching which lacks definiteness of purpose lacks that which is most vital in its success. If a method of procedure is adopted and used without examining into its availability for the production of the result it is desired to attain, it is much like the oft-bespoken "arrow in the air." It may hit, but the chances of its missing the mark are too great to justify the plan. It is necessary that the results of instruction must be clearly formulated in the mind before deciding upon any special device or mode of procedure; that which may be utterly inadequate and devoid of value when viewed from one standpoint, may be fully justified from another. In considering the problem of raising the shorthand speed of a class, then, it is necessary first to find out what the essentials of shorthand speed are, and then outline the method of instruction including in it only those things that will definitely serve to develop such essentials.

Ascertaining Basic Elements.

Stenographic speed is the development of skill which is based upon several elements. The teacher of a speed class must know what these elements are because they are the things he must persistently emphasize in the instruction. Two ways are open

to the teacher in search of such knowledge: subjective and objective experience. That is, he may discover what they are by self-analysis, and this means that he must have had the experience; he must have gone through the grind of raising his own speed; he must have met the difficulties and overcome them before he can suggest to his students how to do it. And he may have recourse to the experience of others who have triumphed in the battle. There is abundance of such material from writers who have arrived at the goal of high speed, and who have described the steps they have taken and the obstacles they have encountered on their journey.

Objective experience, the story of how others have done it, is valuable, but the subjective experience should be in the equipment of all. However, it is not given to all men to be keenly self-analytical, and he will be acting wisely who supplements his subjective experience with the experience of others. Miscalculations may occur in either, and one should serve to check the other.

Both.

The development of stenographic speed rests, for one thing, on correct habits of writing. A certain degree of manual dexterity must be developed, and pen-gripping, heavy-handed, finger-cramping penmanship makes the work many times harder than it would otherwise be. The relation of penmanship to speed varies in importance with different systems

Correct Writing Habits.

of shorthand but it is a factor in all. The teacher of shorthand meets many different types of incorrect writing habits, and fortunate, indeed, is the teacher of a speed class who finds that the proper holding of the pen or pencil has been made a part of the elementary instruction in shorthand. Such penmanship weaknesses are generally lost sight of in the early days of instruction, but they stand out glaringly as soon as the student is put under pressure, and that is probably the reason why it usually falls to the lot of the speed class teacher to correct them. Students should be started right from the beginning of the course, and their training in correct habits of writing should be progressive. The different types are known to all: there is the one who grips his pen, as David Wolfe Brown says, "like as if some one was going to take it away from him"; there is the one who writes with a pen and the finished product looks like as if a brush had been used, the same one who always breaks the point of a pencil, or sticks the pen in the paper; there is the one who lifts his hand and hovers over the paper until ready for descent when he darts down like a bird on its prey; and there is the one who gets to the end of the line and draws back his hand to the beginning so slowly that it seems he is going to discontinue writing altogether. There are other types, and one of the first things the teacher should do is to make known to the student, who may be unaware of his fault, the existence of such a handicap.

Eliminate Physical Strain.

The first step in getting up speed is to write with comfort. This does not mean the absence of strain due to writing a little above one's capacity, but it means the absence of strain due to uncomfortable physical surroundings. Strains that are due to the absence of light, heat, air, and space should be eliminated. It not infrequently happens that a student does not succeed in getting down the dictation and is at a loss to understand the cause. It is easily discoverable when it is seen that he has his books strewn all over the desk, and he is attempting to write in a space just large enough to hold the paper, and that his hand has no adequate support. It is true that under abnormal conditions stenographic work must be done in this way, but no one has ever advocated the practice for working up speed. The teacher will do well to see that each pupil is comfortable when writing, and that faulty habits of penmanship are corrected. The hand should glide along the paper smoothly, with a light touch and with even transitions between words, not jerkily ; and each pen lift should not be a hand lift. This writing difficulty may not appear with every student, most likely will appear with only a few; but the teacher must be in a position to remedy the fault as soon as it appears. In some systems of shorthand the publishers issue regular penmanship drills, of which the teacher can avail himself for the benefit of these few ; in other cases it will be well for him to make up his own drills.

The second element in working up speed in shorthand is the thorough knowledge of the system written. One who has worked through the first elementary instruction book does not fit this description; but the one who has studied each principle over and over, individually and in relation to the whole system, the one who, after having a struggle with an outline, takes the trouble in his leisure moments to look for the controlling principle in his instruction book. Such a one is likely to have a thorough knowledge of the system he writes. Such a one is likely to appreciate somewhat fully the possibilities of the various expedients in the system, and when he is not progressing with sufficient rapidity, he will not begin to invent new abbreviating devices that violate principles and lead to eventual confusion.

Knowledge of Theory.

Like most other things, there is a time for initiating outlines, but the time for it is when one has fully mastered the system, and has exhausted its possibilities. Any of the systems in general use are capable of a speed much higher than the student rate of one hundred to one hundred and twenty-five words per minute, and variations of them which seek to introduce a cumbersome system of abbreviating devices which may secure a temporary gain in speed should be looked upon with suspicion. A well-known court reporter made the statement not long ago that " in working out the details of

Original Outlines.

a shorthand system, the author enjoys an advantage that is not possible to the ordinary writer. It is the opportunity for research, and his work embodies the experience of, perhaps, hundreds of thousands of writers, who have put it to the test of actual working conditions. You can accept his conclusions with absolute faith in their practicality and in their soundness." This is a strong statement, but for the " ordinary writer " it holds true. Too often the outline given in the text or dictionary is discarded and one chosen, which further experience shows is impracticable. Improvisation of outline is not here condemned, but it should be done only when the one who attempts it is qualified by knowledge and experience to do it. Let not the aspirant for speed, therefore, dismiss certain parts of the theory with the abrupt statement " that is not important ; it is seldom used." He cannot tell but in his later experience it might answer the very need that tempts him to improvise. Let him get a thorough knowledge of the system. Another element entering into the acquisition of speed is the power to apply readily any principle of the system when confronted with an unusual word. Knowledge of the theory of shorthand and the ability to make instant application of the theory in practice are two very different things. No matter how glibly a student may recite the rules of the text, no matter how ready he is with the illustrative words that generally accompany such rules, he has not prepared

himself for speed work until he can apply without hesitation every rule that he knows. It is this ability that enables the writer to keep going no matter how hard the words become.

Eliminating Mental Hesitancy.

At the outset it is necessary to admit that the system or course which does not equip the student to write every word in the language fails in a very important particular. The student must be equipped to record every word, no matter how seldom its use. Hesitation is detrimental to speed, and there are only two ways in which the mental hesitancy can be overcome or diminished to the minimum: either by the ready application of the word-building principles, or by rote memorization. The teacher has to choose between them, and when the magnitude of the task of memorization is realized, it is quickly abandoned; but the difficulty is that it may not be appreciated soon enough, and that the power to apply the principles will have been neglected until it is too late in the course to change. This difficulty is thoroughly treated in David Wolfe Brown's *Mastery of Shorthand.*

Word-Carrying Capacity.

The next element to be considered in regard to shorthand speed is the cultivation by the student of word-carrying capacity. There is constant necessity of writing under pressure during the speed course, that is, when the writer has to put forth every effort to get the dictation down verbatim, and during this trial the writer is always a few words behind

the dictator. In the beginning of their practice some students immediately get confused as soon as the dictator gets a few words ahead, and they lose sentences at a time. They have not the poise and confidence which comes from the ability to carry in the mind the part of the selection which has been read but not yet written. There is a certain amount of distributive attention necessary to do this successfully. While the dictation is going along at an easy pace, the writing is done with the attention distributed on the execution of the characters and the context. As soon as the speed rises the attention must be redistributed, and a new element enters, that of carrying the words which are neither being written nor heard. This word-carrying ability may be developed by those who do not possess it, and drill upon it through memorizing and repeating long sentences is recommended by many qualified to speak on the subject. S. S. Packard was a firm believer in the efficacy of such drill.

Mental hesitation is not altogether eliminated, however, when the ability to apply the rules readily and the power to carry words in the mind have been developed. Another cause of hesitation and indecision in writing is that of a too limited vocabulary. It has been said many times " words are the stenographer's stock-in-trade," and the truth of the quotation may be seen daily in the class-room, both in the transcripts prepared and in the ludicrous

Vocabulary.

errors that appear in the shorthand. The stenographer has need of a large vocabulary both in longhand and in shorthand. It is not infrequent for the writer who has no acquaintance with a word to put in syllables that never appear in it but which seem to be heard; this arises from ignorance, for if the word were known, the ear would catch it easily, and a reference to the context would determine by its appropriateness whether that was the word heard or not. Then in the deciphering of outlines how many egregious blunders are attributable to ignorance of the word used? The student who possesses a good knowledge of English is favored with one of the biggest advantages in the stenographic race.

Steno-graphic Vocabulary.

Side by side with a command of a great number of English words should come the ever-increasing control of a great number of stenographic outlines. A word can be written automatically much quicker than it can when it is necessary to apply the principles of word-building to it, and as the student progresses through the course, one of the best indications of his success is the infrequency with which a word is met that he cannot write off-hand; the number of stenographic word-friends should always be on the increase until he must go afield to meet a word-stranger. In working up the speed of a class it is the problem of the teacher to see how he can weave the building of the vocabulary

into the daily work so that each day adds its mite until it has become mighty.

Repetition.

No one has ever contended that repetition practice has not its place in the plan for raising shorthand speed. But much discussion has been had upon the emphasis to be placed upon it and the amount of its use. Some teachers rely almost wholly upon repetition practice to raise speed. They maintain that it trains the eye, hand, and memory; enlarges the vocabulary both in longhand and in shorthand; develops manual dexterity, and that the great number of words which it reduces to automatic control renders it possible to halt while a difficult word is studied out. Those who condemn repetition practice seldom do so unreservedly. They claim it should not be made the sum of all preparation, but that it is a minor part of it. When it is made the basis of the work, it brings about an artificial condition in that the student never becomes accustomed to meeting stenographic word obstacles, and that he is "floored" as soon as one rises in his path. It is further urged that repetition is unnecessary since the bulk of all matter is much the same and repetition is secured in this way. One writer discussing the topic naively suggests[1] that it is due to the fact that a school would require less teachers with the repetition plan because the students can be kept busy copying over and over again while the teacher is otherwise employed.

[1] Walworth, *Shorthand and Typewriter News*, Vol. 1, No. 6.

Like most conflicting views, there are kernels of truth in each. It needs no close examination to show that the two views are traceable to one of the elements already discussed in this chapter the ready application of the principles. Those who have insisted upon this point from the beginning will find use for a limited amount of repetition, but will present new matter with which to give the pupil power. Those who have not developed this ready application of the word-building principles have to resort to rote memorization in its extreme form, and repetition is the keystone of this system.

Essentials of Repetition Practice.

If we apply the principle enunciated in a previous chapter, that the method must be judged in the light of the end to be obtained, a solution of the difficulty is apparent. It is undoubtedly true that repetition does many of the things claimed for it; but repetition may be wasteful as well as helpful. To be helpful it should be regular, systematic, and attentive. When repetition is characterized by these qualities it may be used to develop form and accuracy in execution; it will increase the vocabulary, and it will give manual dexterity. Then when the teacher wishes to obtain these ends, by all means let him use repetition practice. When he wishes to give practice on the application of word-building principles, or test out the vocabulary, or obtain a transcript let him use new matter. The lesson that tries to do all of these things to the

same extent is likely to be as effective as the efforts of the "Jack-of-all-trades." Do one thing at a time, and do that well. Find out the result to be obtained and then take the means that will most efficiently produce the result. Repetition practice should never be discontinued, but the use of it will vary in proportion to its utility in producing the result we desire. There cannot be the slightest doubt but that both repetition practice and new matter must be considered in getting up speed, and the number of those who rely almost wholly on repetition work is rapidly decreasing. Teachers are beginning to realize that repetition can be useful only for short periods during which the mind can remain at full attention. *Pitman's Speed Tests and Guide to Rapid Writing in Shorthand* offers to ambitious students some very useful hints on this important subject.

Reading Notes.

No plan of developing speed in shorthand is complete unless it utilizes the power to be obtained from the reading of shorthand notes. Extravagant claims are sometimes made in regard to the benefit derived from this practice, and it is well to take rather a conservative view so as not to miscalculate. It is sometimes said that the constant reading of shorthand plate notes is the most effective means of raising speed, that rapidity of execution is unconsciously accomplished. It is difficult to see how this can be true for reading and writing are two essentially different operations. However,

it must be admitted that the reading of plate notes is valuable in developing better execution of characters; that the impression made on the mind becomes so clear that we unconsciously approach our mental exemplar. It is also true that extensive reading of this character is serviceable in developing the ability of interpreting outlines as a whole in the same way that the ordinary person reads longhand; that it frequently results in enlarging the shorthand vocabulary for when difficulty is met in reading a word, the form of that word is more easily remembered. "There are two different modes in which knowledge of an art may be possessed—the critical and the practical. The former gives the ability to understand and appreciate what has been executed by another, the latter the ability to execute for oneself. The art of reading Phonography is of the former, that of writing it of the latter species of knowledge."[1]

Importance of Reading.

In reading his own notes the student brings his stenographic work to successful fruition, for it will avail him nothing to have the maximum speed of which a human being is capable if he is unable to decipher what has been written. The lightning calculator who adds column after column in a short space of time finds no market for his services if his work is not accurate; so with the shorthand writer. The correct transcription of the notes

[1] Andrews and Boyle, *Word Book*, No. 1, pp. 8 and 9.

is the final act of the speed writer that gives the work value. For this reason everything that is written should be read; the supposition that it can be read is of no value, but the actual reading of it has a distinct value no matter how many times the reading is repeated. The greatest benefit to be derived from such reading is the knowledge which the student obtains of his chronic errors of writing. Under the pressure of speed distortion of notes is always likely to occur, and the more the notes are read, the greater the familiarity is obtained with these distortions and the ability to read them readily by making allowance for a distortion that is likely to occur is acquired. Of course, success in reading poorly executed outlines might encourage the tendency to write poorly, and this danger must be guarded against.

In planning the instruction of a speed class account should be taken of all these essentials: correct habits of writing, a thorough knowledge of the system, ready application of word-building principles, the word-carrying capacity, vocabulary in longhand and shorthand, repetition practice, use of new matter, and reading practice. When the instruction is planned with these things in view success is more than half attained.

CHAPTER IX

SUGGESTIONS FOR CONDUCTING A SPEED CLASS

In outlining the work for a speed class the first thing that the teacher must consider is the amount of time at his disposal and its distribution. Fifty minute recitation periods are very commonly used, and in this chapter the work will be outlined on the basis of such a period ; suitable allowance can be made for periods of different length. In order to describe a typical lesson it is necessary to assume that the routine factors have been provided for ; that a student will look after the light and ventilation, another will distribute the necessary paper, that another will mark the attendance, another will check the home-work after it has been handed to him by the students as they pass to their seats, and so on with other routine matters. Such things as light and ventilation, distribution of paper, should be attended to before the time for the actual lesson to start, not occasioning a second's delay but the marking of the attendance, checking of home-work, etc., may have to be done by the student during that part of the lesson that he can best afford to lose, for instance, during the time the class is reading back the repetition practice. It is further assumed that an assignment has been made at the previous recitation,

and that the class has had to prepare three letters of about one hundred and twenty-five words each, it being required that they should be able to write every word correctly without hesitation, and that they write each letter three times from dictation as neatly and as accurately as possible.

Teacher's Preparation.

The teacher's preparation will consist of a selection of words taken from the assignment which are to be dictated to the class to test the thoroughness of preparation; a drill chart such as described in Chapter IV, containing contractions, or words in previous exercises; selection of new dictation material which has been written over in shorthand and in which the words and phrasing have been noted; the corrected papers that have been handed in the previous day, and the assignment for the following day.

Test of Preparation by Student.

The teacher begins the lesson with the dictation of the words selected from the home-work to test the thoroughness of the preparation. These words are selected promiscuously, sometimes being the most unusual, sometimes the usual, sometimes contractions; for if any plan of selection is adhered to, the class will soon find it out and then preparation will concentrate on one part and neglect the others. The ability of the student to write every word accurately and correctly indicates thoughtful preparation; failure to do so indicates unsatisfactory preparation and further work should

be done, a good plan being that those who fail receive their papers back, write out the outlines, all that were dictated, several times, say ten, and hand in this paper the next day as part of the next day's preparation. As soon as the words are written, the teacher has the papers collected and they are corrected out of class, each one that is perfect being stamped " Approved," and each failure simply checked and returned. The next day these papers are given back to the students after the pupil who has charge of the test records has made the proper entry. The following day the unsatisfactory papers must be re-written and handed to the teacher, who stamps them and hands them to the recorder. This method enables the teacher to tell at the end of a certain period just how many times each pupil failed during the time satisfactorily to prepare the work. Avoidance of the additional work given for failure acts as an incentive to doing the work thoughtfully, and it also serves to impress the words of the lesson on the minds of the pupils and to build for them a vocabulary, which needs only supplementary drill to strengthen it. The dictation of these words and the collection of papers should not consume more than two minutes.

Drill.

The next step in the lesson is the drill work. Whatever material is chosen for drill is put on a drill chart and dictated to the class, every time changing the order of dictation and increasing the speed. The words or

phrases are then read back by the various members of the class, and the reading can be checked from the chart or from the copy of some other member of the class. Five minutes should be long enough to do effective work on twenty-five or thirty words.

Repetition.

From the drill work the class passes to repetition practice. Here a selection of material must also be made. Straight matter, commercial letters, etc., may be used. Some teachers use the same selection daily for repetition until a required speed is obtained by most of the class and then they take another selection. Others use the prepared work for repetition practice. The use of the daily prepared work is the more serviceable because it contains a greater vocabulary, greater variety of phrasing, and is less likely to be memorized.

Student Dictators.

The dictation of the first part of the repetition work should be given by members of the class. This enables the teacher to go about the room looking at the work of those who need his help, advising them, and where necessary giving a demonstration. In this way faulty habits of writing may be corrected, the teacher sees how effectively a vocabulary is being built, for if a selection that was prepared two or three days ago is read and the student under observation writes most of the words incorrectly, it is a certain indication that those words have not been mastered and that more seriousness has

to be put into the work. The teacher can also judge of the word-carrying capacity of the different students, and where necessary, he can give practice in this line by stopping the pupil's writing until the dictator gets a few words ahead and then telling the students to catch up. Of course, this could not be done with one who did not find the speed of writing within his power. Through the opportunity for observation which this student dictation gives the teacher, he is enabled to come closer to the individual problems of the student and to keep in close touch with the improvement made through the remedy he suggests. It is not possible for any teacher to read, keep track of the time, and try to observe the writing of the class at the same time.

Metronome.

In order that the students may be able to read, it may be necessary to use a metronome. Every member of the class can learn to read with this machine after five minutes' demonstration and then the teacher has thirty substitute dictators at his disposal. All that is necessary is to read a word at every tick of the machine, and after a little practice the ability to phrase may be acquired. To train every member of a class to read at a certain rate of speed or rather at different rates of speed, would require considerable time, and then the speed could be changed without the knowledge of the others. With the metronome, the speed cannot be changed once the time is set.

There is another advantage in having student dictators. It is the best corrective for slovenly habits of speech that can be employed. Let the pupil whose enunciation is careless attempt to read a selection, and he will very soon discover that his reading cannot be understood, and he becomes conscious of his errors of speech. If the student wishes to be understood it is necessary to attend carefully to his reading, and since the pressure comes from the class, and is the result of a natural emergency, the student is so much the more impressed with the necessity of using care in his manner of speech.

Effect of Dictation on Student's English.

The second part of the repetition dictation should be given by the teacher without the metronome. In this part the class has the benefit of clear enunciation, distinct pronunciation, correct phrasing, and the impetus that comes from the voice of the trained dictator. The entire time devoted to repetition practice should not be more than fifteen minutes.

When the dictation of new matter is taken up, the problem of adapting the speed to the greater number in the class arises. As long as class instruction continues, and as long as individual human differences exist, there will be in the same speed class those who find no difficulty in taking with ease the dictation that others find to the limit of their capacity. It may be that more

Adapting Speed of Dictation to Class.

flexible promotions may obviate this difficulty, but until some means of overcoming it is provided, the teacher must continue to struggle with it. To keep the speed suitable for the upper half of the class, and to tell the others to keep on trying to get as much as possible is very discouraging to those whose efforts are not rewarded. Likewise to keep the speed down to the ability of the slower half, exhorting the others to perfect their execution, does not produce results after the first three or four trials. It is probable that most of the dictation should be fairly within the power of the slower writers, and occasional dictation should be given to draw out all the power of the faster ones.

Outline Discussion.

After a letter or a selection has been dictated, it should be read back by the class as called upon by the teacher, each reader being accredited with his success or failure as will be explained later. When the reading is finished, the class may raise questions about stenographic outlines, and useful discussions may be held. However, care should be taken that such discussions should not be too prolonged as they take too much time from the dictation and reading. Extended discussions of outlines are out of place in a speed room, the advantages or disadvantages should be summed up quickly and a decision reached. If the principles have been well learned, the mere reference to a certain controlling principle is probably all that will be

required. All outlines requested should be placed on the board by the teacher and copied down by the pupils, preferably in a vocabulary book. This affords the class the opportunity for correction or verification of outline.

Incentive to Continued Effort.

In all of the dictation work in class there should be a strong incentive to put forth the maximum effort. The usual stimulus in such a class is that of emulation; one pupil tries to get the dictation and to read it as well or better than another. Then there is praise for efficient work, and the feeling of satisfaction after surmounting a difficulty. The teacher should make use of all of these, but there is another stimulus that is effective. In the rating which the pupil receives on his work his success or failure should be considered. Every time that he reads satisfactorily, it indicates that he has written it all, and better still, that he can read it; in other words he has done satisfactorily a stenographic unit of work. A record of this should be kept, and he can be advised of his standing. This record also serves to prevent the excessive calling upon one student or group of students; the reading is distributed as it should be. This does not mean that pupils must be called upon in turn, or alphabetically, but that every one gets his chance, and he tries to make the most of it. Attention at all times is necessary for loss of the place is penalized the same as inability to get the dictation.

In the repetition matter, most of what is dictated should be read. When the teacher dictates, it is well for him to change the wording here and there as it keeps the students on edge to get the changed version. Opportunity is afforded for deciphering notes made at the highest speed of which the student is capable in the repetition practice; and in the new matter, notes which are unfamiliar are struggled with. However, it is the practice of some teachers to introduce another kind of reading in their classes, that of the reading of "cold notes." This can be accomplished by having the dictation taken in note-books which are dated on the new page at the beginning of each lesson. The letters are numbered, and at any time the teacher may call upon one of the students to read such and such a letter written on a certain date, maybe a week or a month ago. The time taken for the dictation of new matter and the reading of notes should not consume ordinarily more than twenty-five minutes.

"Cold Notes"

The next step in the lesson is the assignment. This may be given in two ways: The material used for new matter may be used for repetition practice the following day, and it could easily be prepared; or a new selection may be given. If the first plan is used, the class has had all the doubtful outlines given to them after making their own trial at them, and they can, therefore, be held responsible for knowing them. Should the second plan be used the

Assignment.

outlines must be looked up in the text or dictionary, and the time of preparation is by so much prolonged.

Blackboard Dictation.

Taking speed dictation on the blackboard has a doubtful advantage. It takes the student out of the normal condition under which he later will have to work, and the same response is never encouraged if the conditions furnishing the stimulus are changed. In the speed class most of the board work should be done by the teacher. It may be used at times to stimulate the interest of the more advanced pupils, but for those who are trying their best to get the dictation on the paper, there does not seem to be much advantage. Occasionally it is inspirational for the teacher or an advanced writer to " take " the selection on the board, but on the whole, there is not much benefit derived.

Elements of Recitation.

It will be seen in this lesson that all the elements of the recitation are present : the initial test of words and the repetition matter being the reproduction, the factor of drill following, the instruction of new outlines and the discussion being given in the new matter, and the assignment made. It will also be noted that most of the elements of speed are provided for. By the opportunity to observe the pupils while one is reading, the teacher is in a position to look after careful execution of outlines and the formation of correct writing habits, to develop word carrying capacity, to see to effective

vocabulary building. In the presentation of new shorthand forms, the knowledge of the theory is kept fresh in mind, and the ready application of it is necessary.

The division of time for the lesson will depend more or less upon the object in view. For example, if it were a lesson at the beginning of the speed work when much attention is required to writing habits, the repetition practice might be greatly extended with profit. And so with the other elements. All that is needed to produce results is a definite object and the sensible use of the means by which it can be attained.

CHAPTER X

TESTS AND EXAMINATIONS

THOUGH there may exist some division of opinion as to the educational practicability of tests, it is generally conceded that they are necessary in the scheme of teaching as it is at the present day. When the subject of shorthand is considered, it is not only necessary to make this admission but it is necessary to maintain that they are of vital importance. There is always one advantage of tests that is claimed for them in every subject; they require that concentrated attention and study that frequently makes the difference between knowing and not knowing a thing, and this is as true with a class studying the principles of shorthand as it is of a class studying any other subject. As an educational device the benefit derived from tests in this way is sufficient to justify them. But besides this, tests are necessary in order that the teacher may ascertain the effectiveness of his instruction, that the knowledge given in the various lessons and organized in the review lesson may be supplemented and the organization fixed for ready application, and finally, that the pupil be given the opportunity to make the application of knowledge imparted to him.

Reasons for Tests.

In a shorthand theory test all of these ends may

be kept in view. The test may serve to inform the teacher and the pupil of the progress made in the mastery of the principles or the other elements of the system upon which instruction is given; if properly arranged the principles can be viewed in perspective and a better appreciation of the principles can be obtained; and unhesitating command of this knowledge must be evidenced.

Impressions Unreliable.

The shorthand test is the only means by which the teacher can learn whether the student really knows the work or not, for success in the application of a principle when it is the only one involved in a word, or when the application of the principle is indicated by the appearance of the word in a certain group, does not necessarily mean that the applicability of the principle would be recognized if the examples were presented promiscuously. This is the reason that a general impression of the student's ability obtained from his exercises or from his daily work is very likely to be at variance with the result of a good test. Just as some animal trainers fool themselves into an exaggerated appraisal of animal intelligence when the animal performs some trick, the cue for which is unconsciously given by the trainer, so the teacher and the pupil are deceived into believing that mastery of the principle is obtained when in reality the application is made obvious by the way in which the problem is presented. The test eliminates these things and compels the student to make an independent

application of the principles which is likely to be reliable as a basis of judgment. "Unhesitating promptitude of execution within the domain of the principle undertaken to be taught must, from the start, be the test as to whether the principle has been mastered, and whether the student is making healthy progress."[1] The healthy progress of the student can be ascertained only through the test.

When a test is given in Pitmanic shorthand on the initial or final hooks, the points of similarity or difference are brought out strongly; the likeness or contrast impresses them on the mind so that they take a more definite form and their recall is facilitated.

Mode of Testing Determined.

The mode of testing will depend upon the nature of the subject to be tested. In shorthand the material to be tested is of two kinds: automatic and reflective. By the automatic material is meant the grammalogs, contractions, and phrases which the student should be able to reproduce without reflection from the beginning of his course. By the reflective material is meant, not that unlimited time should be given for writing it, but that it is not necessary to write it as quickly and with as little reflection as the grammalogs or word-signs. The words involved in the various principles are of this class. Since reflection indicates that the power of recall and reproduction is not instantaneous,

[1] David W. Brown, *Mastery of Shorthand*, p. 16.

it should gradually be eliminated and every test in shorthand should be conducted under a time limit, with the time allowance growing less and less. A student who can write the word-signs or contractions as they are dictated to him promiscuously at the rate of one every three seconds and read them back has really mastered them. The student who has studied a principle and can write words involving the principle in fifteen seconds need have no fear that the foundation for speed work is not being well laid. Of course, if this time limit can be reduced, so much the better.

A test should involve all the necessary elements of the work upon which instruction has been given.

All Necessary Elements. It is a mistake to test a class upon the principles and neglect the word-signs, for this is sure indication to the class that the teacher does not consider the word-signs important, and the earnest attention of the student to this feature of the work is lost. Likewise, if the phrases are neglected, they suffer in the amount of practice and preparation given to them. If word-signs, phrases, and principles have been taught, the test should include material from each division. It is the same with a speed section. Some teachers strive to accomplish many things in the speed work, and when they fail they cannot account for it. For instance, a teacher may be trying to build for the class a stenographic vocabulary; but when the test comes, he dictates a five

hundred word selection and requires a transcript. The students see no connection between the work done in vocabulary building and test, and they soon come to regard the effort to build a vocabulary as useless, unimportant and perfunctory. But let them see that the teacher considers it important, that their work is checked up, and that it is part of the test, and there is a different spirit exhibited towards it.

Test from Standpoint of Pupil.

In the eyes of the students the tests sometimes seem to become the end of the instruction and they lose all sense of the proper relationship between the test and the ultimate end of instruction, but this danger is less in shorthand than in other subjects where parrot-like reproduction of ideas passes as knowledge. In shorthand speed work, skill is tested, and the skill required in one test, if adequate, is sufficient to meet the demands of similar situations. But because of the undue importance attached by the students to the various tests to which they are subjected, a judicious method of marking the papers is very necessary. An arbitrary, unjust method of rating may spoil the effect of an otherwise good test, and be extremely detrimental to the future instruction of the class. The class that suffers under the arbitrary, dogmatic rating method of the teacher who thinks his scheme of rating concerns only himself and that the pupils have no right to know how he reaches his conclusions is to be pitied. There is little incentive for conscientious

work, and ignoring the policy of the "square deal" never brings about harmonious relations.

In rating the speed tests there are several standards that the teacher may use, such as the rules for rating laid down by the Civil Service and the Regents of the State of New York; but in the matter of the theory tests, teachers must often have faced a difficulty without having any standard to which to refer. That difficulty exists, for example, when in writing a word in shorthand the student has the correct consonantal elements but the wrong vowel. Should he be given no credit for the word? Or should the error be overlooked and full credit be given? Or suppose a stroke should be shaded and it is made lightly, or a consonant should have been a short stroke when it was made long, what is the teacher to do. Many elements enter into the mistakes made, and to handle them in some systematic way requires no small effort on the part of the teacher. It is apparent at the outset that neither plan, that of giving no credit or that of leniently overlooking the error, is strictly correct. To regard as wrong a word containing one incorrectly written element and two or three correctly written elements can be justified only in one way: that the teacher considers the word a unit, and if the unit is not correct, none of the work receives credit. This method is marked by severity, and is inclined to be rather arbitrary since it establishes an arbitrary unit in the face of existing real units.

Rating Theory Tests.

To be consistent it would be proper to extend the principle and regard as incorrect a sentence in which one word is incorrectly written ; or a paragraph in which one mistake appears. The other method is marked by leniency and serves to encourage carelessness.

Scheme of Valuations.

However, there is an intermediate course in which values are assigned to the various elements entering into the operation. After the writer had read to the New York Conference of Evening High School Teachers of Shorthand a paper on " Measuring Results in Shorthand," Mr. John G. Dunbar, of the Brooklyn Evening High School for Men, brought in the following scheme for rating papers. In rating words no credit was given if the outline was incorrect, that is, if all the consonants were not correct. If the consonantal outline, the position of the word, and the accented vowel were correct, full credit was given ; if the outline was correct and the position or the accented vowel was wrong, one-third of the credit would be deducted. It can be seen that even this elaborate valuation of elements does not do full justice. As a matter of fact, there is no necessity for expressing the ability or power of a student in percentages, or in literal denominations. All that is necessary is that the student know his shortcomings ; that he should know definitely and specifically the cause of failure so that a direct, effective remedy is applicable. Grading may appeal to the spirit of

emulation in a class and lead the student to try to outdo another student, but the best kind of emulation is that which stimulates the student to try to do better than his own previous efforts. The plan for measuring results explained in the next chapter can be used for this purpose.

Rating of Speed Tests, Municipal Civil Service.

In rating speed tests there are three plans which offer suggestions: the plan used by the Municipal Civil Service, that used by the Regents, and that used by the Federal Civil Service. In all Municipal Civil Service tests there are three dictations given at different rates of speed, and the candidate is allowed to choose the one he desires to submit for rating. If he submits the lowest dictation, he is credited with a speed rating of 70 per cent.; if the second is chosen, he receives 85 per cent., and if he takes the highest speed, he is given 100 per cent. The mark given the candidate for speed is then combined with that given for accuracy, the former counting one credit, and the latter counting two credits, and the average is the final rating. Thus, if a candidate received a speed rating of 85 per cent., having taken the second highest speed dictation, and his accuracy rating was 70 per cent., his final mark would be 85 plus 70, plus 70, or 225 credits divided by three, giving an average of 75 per cent. The accuracy mark, it will be noted, is added in twice because it is accorded twice as much weight as the speed.

The plan of marking for accuracy is outlined by one of the examiners as follows: "Trifling errors are dealt with leniently; but serious mistakes, considerable omissions, or versions that make nonsense, get heavy demerits. Every paper is carefully gone over by two examiners, and the average of their marks makes a final rating. It is impossible to say just what deductions are made for certain errors because the demerits depend upon the nature of the errors made and upon the seriousness of the error, but the demerits for omissions bear a due relation to the ratings accorded the different speed tests. Suppose the dictation consists of 600 words. Four minutes would be necessary in which to take that down at 150 words a minute, but if the dictation were given at 165 words a minute he would have eighteen seconds to spare and fifty words can be written in eighteen seconds, so that if he dropped fifty words from the second dictation without spoiling the sense of the matter, his second dictation would be as good as the first, and if his omissions were fewer the second dictation would be the better. The difficulty lies in dropping out fifty words from 600 and still make correct sense, and this is where the candidate must exercise his judgment before making a selection. He would be safer under such circumstances to submit the lower and correct test, but, if, instead of fifty words he had dropped but thirty, and still did not spoil the sense, then the second test might merit

the higher rating for speed. The same rule applies to the third and highest test." [1]

The Regents of the State of New York offer only one dictation in each grade of examination.

Regents.

For Grade I, they offer a dictation at fifty words per minute for ten minutes to be transcribed in one hour, although ninety minutes were allowed in June, 1913. In Grade II, 500 words are dictated in five minutes, and the time for transcription is the same as that in Grade I. The directions for rating papers are much more definite than those of the Civil Service. They deal specifically with each type of the more common errors. The plan of rating follows:

Deduct one credit for each.

(*a*) Omitted word.

(*b*) Added word.

(*c*) Substituted word.

(*d*) Transposition.

(*e*) Use of plural for singular, or *vice versa*, where the sense is changed.

(*f*) Use of longhand in notes.

Deduct one-half credit for each error in

(*a*) Capitalization.

(*b*) Punctuation.

(*c*) Division of words.

(*d*) Repeated words.

(*e*) Spelling.

(*f*) Omitting hyphen.

[1] James T. Conway, Assistant Chief Examiner, New York Civil Service Commission, *Stenographer*, Feb., 1912.

(*g*) Unauthorized abbreviations.

(*h*) Use of singular for plural, or *vice versa*, when sense is not changed.

From one to five credits may be deducted for any error not mentioned above, lack of neatness, etc.

Suggested Changes.

In February, 1913, it was proposed to change the plan of rating Regents papers, and State Inspector of Business Education, Wallace E. Bartholomew, sent the proposed changes to the teachers throughout the State to get their opinions upon them. It was proposed to introduce two dictation tests for examination for credit in Grade II, an 80-word test, in which it is necessary to obtain 75 per cent. as a passing mark, and the usual 100 word test, in which the passing mark is 60 per cent. The transcript for the latter was to be rated as outlined above. For rating the 80-word test, the following was suggested:

1. The transcript will be rated on the basis of 100 per cent. for accuracy by the schedule or rating now in force, papers falling below 75 per cent. to be rejected.

2. The final mark of an accepted paper will be determined by the average of the mark obtained for accuracy with an arbitrary mark of 70 per cent. given for the rate of speed; *e.g.*, a paper rated at 90 per cent. for accuracy would receive a final mark of one-half of 75 plus 90 per cent., or 82½ per cent.

[1] *Shorthand and Typewriter News*, Feb., 1913.

Federal Civil Service.

The Federal Civil Service uses a scheme of rating similar to that used by the Regents, but it seems to be a little more severe : 70 per cent. is required as a passing mark. The plan is as follows :

Three credits are deducted for each word omitted, added, substituted, or misspelled, or for the use of the singular instead of the plural, or *vice versa*, when the grammatical correctness is affected.

Two credits are deducted for each transposition.

One credit is taken away for each gross error in capitalization or punctuation ; for each error in division of words ; for each repeated word ; for each failure to use the hyphen when required ; for each abbreviation ; or for the use of the plural for the singular, or *vice versa*, when the grammatical correctness is not affected.

For interlineations, erasures, and lack of neatness, from one to five credits may be deducted. In this examination speed in writing the notes is weighted equally with accuracy in transcribing them, and the marks credited for the different speeds are : 70 per cent. when the dictation is at the rate of eighty words per minute, 80 per cent. for 100 words, 90 per cent. for 120 words, and 100 per cent. for 140 words.

These three standards of rating are given here so that the teacher may know what method of rating is used by each of these three boards whose business it is to rate thousands of such papers,

and whose experience has been ample enough to enable them to develop the most efficient schemes; so that he may outline a plan of his own, and also that he may adopt the plan for testing those who desire to take examinations with these various boards.

In general, the test should include every important element of instruction; it should not only enable the teacher to find out what the pupil knows or does not know, but it should serve to organize the knowledge and require ready application of it. The test should be conducted in a way that will show whether the student has learned the things in the way in which they should be learned. For example, a test on word-signs in which a half or a quarter of a minute is given for writing each would not be satisfactory because they should be written almost instantaneously, therefore they should be tested in this way.

There should be a judicious plan for rating the tests, and this involves a recognition of the varying importance of the different elements entering into the test, an appraisal of the value of the units of operation, and most important of all, the plan should serve to bring about more efficient classroom work. The student who finds his daily recitation counting definitely for or against him in the final rating is likely to put forth more consistent and earnest effort than the one who merely practises daily so that he may do well in the test when it comes.

Influence on Daily Work.

The one who finds his ability to read his notes taken account of every time he is given the opportunity has an incentive not only to get the notes all down, but to get them down accurately enough to read them back readily. It is in this way that tests and examinations may become very valuable as an aid in the instruction.

CHAPTER XI

MEASURING RESULTS IN SHORTHAND

PROBABLY no movement in education is more encouraging than the insistence of educational authorities upon reducing the results of teaching to accurate measurement. While much remains to be done in this direction before adequate scales of measurement are established for every branch of instruction, yet a beginning has been made, and in view of the work done by Thorndike, Rice, Courtis, Stone, and others, it would be rash to maintain that results in education are not subject to measurement. Subjects that demand the development of skill should be easily susceptible of accurate measurement, and as shorthand is in this class, it is the purpose of this chapter to outline a plan by which the results of shorthand instruction may be judged.

What Plan Does.

As the plan for measuring the progress of a speed class is simpler than that for measuring the mastery of the theory, it will probably be better to consider the former first. Through the application of this plan it will be possible (1) to determine accurately the increase in the power of the student to take the dictation and to furnish an accurate transcript, and (2) to find the specific weakness of the individual student so that a definite plan for improvement may be suggested.

When a student receives a mark of 75 per cent., it has no definite signification to him other than that his transcript had a sufficient number of errors to justify a deduction of 25 per cent., and when his paper is given back to him, he is probably satisfied with the cursory glance at it to discover the nature of his errors, if he looks at it at all. Another student receiving 75 per cent. may differ from the first in ability, but the mark given for the test does not reveal this difference. And when the first student receives 80 per cent. in the next test, it indicates to him only that he succeeded 5 per cent. better than the last time, or that he managed to transcribe five more words; it may also signify that his orthography has improved, or that his shorthand speed increased so that he was able to get it all down, or that he was more successful in deciphering his notes, and so on. The mark shows him nothing definite, and after the teacher has corrected and marked thirty papers, it is a safe guess to say that his knowledge of the individual progress of the class is somewhat hazy. His recommendations to the class are likely to be about as sensible as those of the teacher who sets three or four problems in interest to a student and judges that what is needed, when the wrong answers are presented, is a more thorough study of the principles of interest, when an analysis of the work would show that the errors were made in addition, or multiplication.

Percentages Unsatisfactory.

This plan of measurement is fundamentally the same as all other plans. The procedure includes two things: the determination of the units involved in the operation, and the classification of the errors according to type. In taking a speed test the student is not only required to get it all down in shorthand but also to transcribe every outline correctly, and it is in the transcription, which is the ultimate end of the work, that most of the units of operation are found. In transcribing, the student is under obligation to write a word in longhand for every outline in shorthand, to avoid substituting one word for another, to spell correctly, to paragraph, to punctuate, and capitalize properly. This is what is meant by the units of operation. In making the scale for measurement the teacher may take all the units into account, or he may take only a few of the more important units such as omissions, substitutions, misspellings, etc. The scale used by the writer contained the following: Omissions, additions, substitutions, not transcribed, misspelled, capitalizations, paragraphing, transpositions, and punctuation. All errors in the transcript were traced and classified, the result showing without the semblance of a doubt, the strength or weakness of the individual pupil. On page 125 is given a summary of the first formal dictation test given to a class of thirty-one, the rate of speed being forty-three words per minute for five minutes, the students being represented by letters, and the

Two Steps Necessary.

Student.	Omissions.	Additions.	Substitutions.	Transpositions.	Not Transcribed.	Misspelled.	Capitalization.	Punctuation.	Paragraphing.	Total.
A	35	1	10		2					48
B	8	2	6		6		1	6	2	31
C	1	1	4		1	2	1	1		11
D						1		1		2
E	48	1	25			3	1	4		82
F	2	1	4		7	2		8		24
G	31	3	4		2	2	2	2	2	48
H	8		5		83	2		3		101
I	36	1	8		1				2	48
J	10		26		1				2	39
K	13	2	15			9	1	4		44
L	4		2		12			1		19
M	11	1	14			1		6	3	36
N	55		10		2	2		11		80
O	32		16	1		5	1	3		58
P	75		4		1	1	1	1	1	84
Q	4	2	5				2		5	18
R	3	3	5							11
S	27	3	12		3	5	1			51
T	30		7		4	2				43
U	15		13		34	8	1	2	6	79
V	Absent									
W	1		5		2					8
X			1			2				3
Y				1		2		8	1	12
Z	30		10	3	6					49
AA								9	1	10
BB	12	1	6		9	1	1	3	1	34
CC	33	2	28		1	2	3	4	3	76
DD	11	3	2		3		2	2		23
EE	14	4			4			9		31
Total	549	31	247	5	184	52	18	88	29	1,203

Test No. 1, Feb. 27th, 1913.
43 words per minute for five minutes.

numbers indicating the errors of each kind in accordance with the column in which they are placed. As there are more than twenty-six in the class it is necessary to represent the excess members by double letters such as AA, BB, etc.

From this chart it will be readily seen that the principal difficulty with the class as a whole was inability to get the notes on paper as there were 549 outlines omitted, and the omissions were quite generally distributed throughout the class. The next type of error which is generally distributed, is that of substituting one word for another, reading the outline incorrectly, and this occurred 247 times. It will be noted, also, that there were 184 outlines so written that they were unintelligible, and the writers could make no sense whatever from them. All these figures are significant to teacher and pupils alike. A glance at the records of students A and P will show that their principal weakness is inability to get the notes down, whereas the record of student H, or that of student U, shows inability to read the notes after they have been taken down; it shows the lowest possible ability in transcription because they were unable to decipher anything from them. In the case of students J and M it will be seen that the weakness is in reading one word for another. Evidently the work to be done by students A and P will differ from that to be done by students H and U; just as the work to be done by H and U will be different

Results of Classification.

from that of students J and M. In the first case speed in getting the notes down is the main desideratum, in the second the power to wrestle the meaning from the notes that have been written is required, in the third case more attentive observation and greater intelligence in the selection of the words is demanded. It will be seen, therefore, that a classification of errors in accordance with this plan enables each student to know his personal deficiency, and the teacher is then in a position to make remedial recommendations that will go directly to the root of the trouble and bring about efficiency with the least possible waste of time and effort.

It is easily seen that if a student's ability can be assayed so definitely by this plan, all that is necessary to measure his progress is to give a similar test at a later period and apply the scheme. If his record for omissions is better than it was in the last test, he has improved. Likewise, any particular type of error will show improvement or retrogression. Sometimes it will be observed that improvement in one respect will frequently bring about a retrogression in another, as, for instance, when a student has to make a great effort in getting the notes down, he may not be able to read them because of their poor form. However, this is an indication of improvement and need not be a discouraging factor; a little more practice will enable him to form the notes without distortion, and then he will have regained his old ability to read them.

Student.	Omissions.	Additions.	Substitutions.	Transpositions.	Not Transcribed.	Misspelled.	Capitalization.	Punctuation.	Paragraphing.	Total.
A	8		10	2	3	1			1	25
B	2	2	3	1		3	1	2	1	15
C						1				1
D	1		3			1				5
E	26	15	8	5	7	4	1			66
F			3			1		1		5
G	14			3				1		18
H	11		6	5		4		2	1	29
I	9	4	9	2	4	2			1	31
J	9	4	20	5	3	5				46
K	14	2	17	1	13	8				55
L		1	6	2	2	1				12
M	11		10	6			1	2		30
N	25		6	5	1	3			2	42
O	9	6	13	5	4	7		1	1	46
P	6	1	9		12	3		3		34
Q	1	4	6	3		1		1	2	18
R		1	11			1		1	2	16
S	6	1	14		1	3		2	1	28
T			4		3	5			2	14
U	10		6	5	2	3				26
V			1			2		5	1	9
W	8		5			1		2	3	19
X			1			1				2
Y		1	2		2	1				6
Z	5	1	14	2	1	2				25
AA			1					1	1	3
BB			8	8	7	5				28
CC	4	3	11	5	2	13				38
DD	1	2			2				2	7
EE	3		2	7		2		2		16
Total	183	48	209	72	69	84	3	26	21	715

Test No. 2, Mar. 13th, 1913.
Fifty words per minute for five minutes.

Second Test.

Below is given the result of a test taken by the same class of thirty-one scholars after an interval of two weeks. This test was about the same in the character of material dictated, but the speed was raised to fifty words per minute. The duration of the test, as in the last one, was five minutes.

Comparison.

It will be seen at a glance in comparing this chart with the previous one that there is improvement. The total number of errors made by the class has been reduced from 1,203 to 715, the most notable advance being in speed of writing, as can be seen from the fact that while in the first table 549 words were omitted, the second record shows only 183. Another important fact is that the number of words which the class was unable to transcribe has been reduced from 184 to 69 without an increase in the substituted words. In considering these figures it must be kept in mind that the speed of dictation was increased and that there were only 30 students in the first test, student V being absent. The progress in the other units of the test can be seen in the same way by a comparison.

Looking at the individual records, it is apparent that student A, for example, has improved since the number of errors made has been reduced from 48 to 25, and the improvement is noticed in that particular point which the first test showed was the weakest, the ability to get the notes down. In the second test the number of words omitted

was reduced from 35 to 8, whereas the other errors remained practically the same. In the case of student P, it will be seen that improvement in getting the notes down has been shown, but the number of words substituted and not transcribed has increased from 4 and 1 respectively to 9 and 12. This is a natural tendency, and on the whole it must be counted a gain since the reduction of the omitted words from 75 to 6 is greater than the increase in the errors of substitution and non-transcription.

In studying the case of student H, it would seem that he was suffering from fright or nervousness in the first test when his inability to transcribe 83 words was shown. In the second test this number has been wiped out altogether, every outline that he wrote being recognizable as some word. The other errors remain much the same. In the case of student U, improvement is seen in the three units of omissions, substitutions, and non-transcriptions, the first being reduced from 15 to 10, the second from 13 to 6, and the third from 34 to 2. A similar comparison of these figures will tell whether there has been improvement and just how much for each individual scholar.

Symbols.

It will be readily admitted that this plan of measuring results does give definite information, and has other advantages, but some will argue that the amount of time it would take to get this data and arrange it would

Student.	Omissions.	Additions.	Substitutions.	Transpositions.	Not Transcribed.	Misspelled.	Capitalization.	Punctuation.	Paragraphing.	Total.
A	5	2	4	3	2	2	1	4	1	24
B						3		3	5	11
C		4	2			4		4	3	17
D			2			1			1	4
E	44	3	8		5	4		3		67
F			3			3		2	3	11
G	5	1	6			2	1	3	1	19
H	3		7			4		6	3	23
I			5			4				9
J	4	1	9		1	2		1	1	19
K	1	2	6			4	1	4	3	21
L	1	1	4			3			1	10
M			4			2		2	2	10
N	Absent									
O	14	3	3		1	4	1	3	3	32
P	1		2		1		1		2	7
Q	2				1	4		2	3	12
R	1	2	2	2		1		3	6	17
S		2	2			4		3	4	15
T	2	2	10		1	3	1	4	2	25
U	5		11		1	5		2	3	27
V		2	1			1		3	4	11
W			3			2			1	6
X		1	1		2	1		2	4	11
Y		1	1			4		1	3	10
Z	2	1	5			2		2	2	14
AA			1			1			2	4
BB	4		15		3	5		2	1	30
CC	3		17				3	5	4	32
DD			1			1		2	6	10
EE	8	2	6		4	4	1	3	3	31
Total	105	30	141	5	22	80	10	69	77	539

Test No. 3, April 4th, 1913.
Fifty words per minute for five minutes.

Student.	Omissions.	Additions.	Substitutions.	Transpositions.	Not Transcribed.	Misspelled.	Capitalization.	Punctuation.	Paragraphing.	Total.
A			8			1			2	11
B		1	2			5		1	1	10
C	1	2	1			1		2	1	8
D		1	1			1				3
E		1	33	22		12		1	1	70
F			7				3		1	11
G	3	1	5	2				2	1	14
H			1			5		1	1	8
I	1	1	1			2		1		6
J	2	1	7	5		4			1	20
K		1	11	1		3		1		17
L	2		4	1	1	2	1	2	1	14
M		1	1				1			3
N			4					2	1	7
O	7	3	18		2	4		4	1	39
P		1	3	1		3		2	2	12
Q		3	11	10		5				29
R		1	4			3			1	9
S			4	4		4		1	2	15
T	3		9	1	1	4	4	5	3	30
U	Absent									
V		1		1		6		1		9
W			5			1			1	7
X			4							4
Y		1				1				2
Z	Absent									
AA			2			2				4
BB		4	16	9		2		7	2	40
CC	4	1	8	5		9	2	2	2	33
DD		5						2		7
EE	1	1	5	1		4			1	13
Total	24	31	175	63	4	84	11	37	26	455

Test No. 4, April 15th, 1913.
Fifty words per minute for ten minutes.

Student.	Omissions.	Additions.	Substitutions.	Transpositions.	Not Transcribed.	Misspelled.	Capitalization.	Punctuation.	Paragraphing.	Total.
A	1		6					4		11
B	1		3			1	1	16		22
C			1			2		1		4
D		1	1			1		5		8
E		2	25		4	8		9		48
F		1	6				1	3		11
G	3		3			1		3		10
H		1	2			1	1	7		12
I	1		1		1			3		6
J	1		4			1	2	1		9
K	3	2	10			2	2			19
L	2	1	3			1	1			8
M		1	1		4	1		1		8
N	3	1				1		2		7
O	5		3			4		3		15
P		2	1			3				6
Q			6			1				7
R		1	3			2	5	1		12
S			3			1	1	2		7
T		1	5			1	1	4		12
U	2		16			10	2			30
V			9			2		3		14
W	2	2	2			1	1	1		9
X						2		2		4
Y	3		8					5		16
Z						3		10		13
AA						1		3		4
BB	2		9			4		1		16
CC			6			2	2	2		12
DD						1				1
EE	1		5			1	1	5		13
Total	30	16	142	0	9	59	21	97	0	374

Regents Test, No. 5, June 16th, 1913.
Fifty words per minute for ten minutes.

be so great that the benefits to be obtained would not justify the expenditure of it. However, there is a plan for simplifying the work so that it will not add very much to the time it ordinarily takes for a teacher to correct and grade a speed test. Instead of marking the errors by means of a check-mark or some other sign, a set of symbols should be established to indicate the nature of the error, and as soon as a mistake is noticed, it should be indicated with the appropriate symbol. This would take no longer than to place a check-mark on the spot in most cases, the only time it would retard the work being where words are omitted in the transcript ; then the teacher must examine the notes to tell whether they are omissions or non-transcriptions. For this reason it is wise to have the test so arranged that the shorthand notes are written down one-third of the page, and the transcription occupies the same line as the shorthand notes taking up the other two-thirds. This facilitates reference to the notes. In correcting themes the teachers of English use a series of symbols to indicate the nature of errors, and the plan can be used with just as great serviceability in shorthand. The following is a suggested series.

O—Omissions	S—Substitutions
A—Additions	T—Transpositions
N—Not Transcribed	M—Misspelled
C—Capitalization	P—Punctuation
¶—Paragraphing	

The three charts which follow complete the

progress record of this class up to the time the Regents examination was given at the end of the term. It should be borne in mind that in the first three charts the examination consisted of 250 words or less, but in the last two charts, the examination contained 500 words, thus rendering the liability of error greater by 100 per cent.; yet the errors continued to diminish.

The progress of individual students becomes immediately apparent when the data from each examination is assembled on a student's individual record card, a reproduction of which is given below.

.....A..... Sten. III Feb. 27, 1913
(*Student's Name.*) (*Class.*) (*Date.*)

Date of Test.	Word Rate per minute.	Time.	Omissions.	Additions.	Substitutions.	Transpositions.	Not Transcribed.	Misspelled.	Capitalization.	Punctuation.	Paragraphing.		Total.
Feb. 27th, 1913 ..	43	5	35	1	10		2						48
March 13th, 1913	50	5	8		10	2	3	1			1		25
April 4th, 1913 ..	50	5	5	2	4	3	2	2	1	4	1		24
April 15th, 1913..	50	10			8			1			2		11
June 16th, 1913..	50	10	1		6					4			11

STUDENT'S RECORD OF PROGRESS.

It will be seen from the above record that the specific weaknesses are found in the first test, and as the record of each succeeding test is added improvement can be seen at a glance.

CHAPTER XII

MEASURING RESULTS IN SHORTHAND

(continued)

In the preceding pages it was shown how the specific weakness of a class or of an individual could be ascertained and how progress could be measured. It is now appropriate to see if the same thing can be done with a class in any part of the theory instruction. The same fundamental principles hold good, viz., the division of the operation into its constituent units, and the analysis and classification of errors.

Units of Operation.

Instead of the units of omission, addition, substitution, etc., that appeared in the transcript of the speed test, it is necessary to substitute those errors that are liable to occur in the writing of the shorthand outline. These may be considered under four main heads: consonants, vowels, abbreviations, and position. It should be possible to classify all student errors under one of these heads. In writing a word he may, perhaps, make a mistake in each, that is, he may use the wrong vowel, write the wrong consonant, get the abbreviating expedient incorrect, and write the word out of its proper position, but such blundering is unusual. If a mistake occurs in a word, it must be an error

in the writing of the vowel, the consonants, the abbreviation, or in the position of the word.

Vowel Errors.

Mistakes made with reference to vowels may be classified under one of the following: omitted, added, substituted, and place. By an omitted vowel is meant one that should be written and which is not. An added vowel is one which is written and which is not sounded in the word. A substituted vowel is one in which the correct symbol is not used, as where a dot is written for a dash, or the third place dot for the diphthong I, etc. For example, if the vowel "a" in the word "bait" were represented by a dash written in the second place after the "b." A vowel which should properly appear in the first place and which appears in the third place, or one which should be written before the stroke and which appears after, is said to be an error of vowel placing. In the example cited above, if the dash appeared before the consonant "b," there would be two mistakes, one of substitution and one of place. These are the principal vowel errors, and they will serve to determine a student's strength or weakness in dealing with this part of the shorthand system.

Consonant Errors.

The errors in writing the consonants may be considered under four heads also omitted, added, substituted, and direction. An omitted consonant is one that is left out when it is needed in the stenographic outline. An added consonant is one which is written

when not needed, as the insertion of the " t " in the word " batch." A substituted consonant is the use of a light for a heavy stroke, or *vice versa*, or one character for another. It does not cover the use of the circle " s " for the stroke, nor the consonant " r " for the hook ; but only the use of one consonant stroke for another. A mistake in direction deals with writing the upward " r " for the downward, or *vice versa*, or the use of the wrong form for " sh," etc. It may also apply to the reverse forms of " fl," " fr," etc.

Abbreviations.

Errors in the use of abbreviations may be classified under three heads as follows : Unused, not allowed, and incorrectly written. Where the student uses a stroke when the abbreviated form, the hook, circle, loop, or other expedient should be used, it is a mistake of the first class, where a student uses the hook, circle, loop or other expedient when the stroke should be written on account of the vowel or some other reason, it is an error of the second class. Errors of the third class consist of using the proper means of representing the character but writing the expedient incorrectly as in putting the circle on the left side of " p " in the word " pass," or writing the " r " hook on the side for " l."

Position.

The last class of error is that of position. Where a word is written with the incorrect vowel and the position of the outline is made to conform to the place of the vowel, there is really no positional error. But where a second

place vowel is used and the word is written in the first or third position, there is an error. A mistake in position exists where there is lack of conformity between the position of the outline and the vowel or principal vowel actually used in writing the word.

Time.

It may look like a formidable task to find out the specific nature of each error, and the time required may discourage some, but it must be borne in mind that the information obtained is positive and worth having, for it makes possible directly the application of the most efficient corrective. If the analysis shows a student weak in the placing of vowels, five or ten minutes' personal attention to that student will remove the deficiency. The experience of those who have corrected tests in the way described above has been that the time is increased from one quarter to one half, that is, if it takes one hour to mark the papers, just checking the errors, it will take ninety minutes to check the errors and classify them.

Record Sheets.

The work can be facilitated by the use of a classification sheet, a reproduction of which will be found on another page. One of these sheets is used for each student, and as soon as an error is found it is marked after the appropriate division, and when all the errors are classified this sheet tells the story of the student's ability. A weakness in any special department of the work can be observed

immediately. These student classification records are then assembled on one class record sheet, a reproduction of which appears on the page following:

CLASSIFYING SHORTHAND ERRORS.

	Total.
Consonants—	
1. Omitted	
2. Substituted	
3. Direction	
4. Added	
Vowels—	
1. Omitted	
2. Substituted	
3. Place	
Abbreviations—	
1. Unused	
2. Not Allowed	
3. Incorrectly Written	
Word Position	
Total	

Name.... ..... Class..... Date.....

Looking at this chart of errors, it can easily be seen what is the power of each student in the application of the principles he is supposed to have learned. Assuming that the test was a well-balanced one, and that the number of phrases given was not out of proportion to the number of words and grammalogs, it is obvious that more attention should be given to phrasing. As a matter of fact there were but ten phrases in the test, and the neglect of this factor in the instruction is apparent. In considering the writing of words, the table shows that the greatest class weakness is in the use of consonants having two possible representations,

Significance of Figures.

STENOGRAPHY I. INSTRUCTION HOURS—37. Oct. 29th, 1912.

NAME OF STUDENT.	VOWELS.				CONSONANTS.				ABBREVIATIONS.						
	Omitted.	Added.	Substituted.	Place.	Omitted.	Added.	Substituted.	Direction.	Unused.	Not Allowed.	Incorrectly Written.	Position.	Grammalogs.	Phrases.	TOTAL.
A	2		1	5			2	2		3	12		1	7	35
B				1				2			1		2	2	8
C								2	1			2	2	6	13
D								1	1	1		2	1	5	11
E				2				2	2			2	3	7	18
F	2			1	2		3							4	12
G								1	2	1		2	1	5	12
H				2			2				2			7	13
I			4				4				8		3	9	28
J				2				2	1	2				5	12
K								2		3	1	3	5	7	21
L	1			1	1	1	1	3	2		1	1	6	6	24
M							1	1					1	4	7
N				1				1	3			1		4	10
O								1	1	1		2	1	6	12
P								2		1		1		2	6
Q			1	1			3	1	1	1	2		2	6	18
R			1		1			2	1				2	6	13
TOTAL	5	0	7	16	4	1	16	25	15	13	27	16	30	98	273

and differing in the direction in which they are written. It will be noted that there were twenty-five of such errors, and the distribution of them is quite general, only three students not having a mistake of this kind. Even though there were

twenty-seven incorrectly written abbreviations, as a class weakness it is not greater than the other, for the distribution is not as great, twenty of the errors being made by two students. It will also be seen that the greatest difficulty with the vowels is in placing them, and that emphasis should be placed upon the method of writing the abbreviations.

As to the individuals, a study of the table will show any specific weakness that exists. In the case of student I, the nature of the work to be done is perfectly clear. In the matter of the vowels he knows how to place them, but he does not know how to represent them; in the use of the consonants, he is not troubled with the direction strokes, as some of the others are, but there is confusion in his mind as to the selection of the means of representation, which, by the way, is analogous to the confusion experienced with the vowels. In the use of abbreviating expedients, he knows when they should or should not be used, but he cannot execute them properly. The record of any other student will tell a story just as complete, and will indicate in the same way the precise character of the work that will most profitably be done.

Constant and Variable Elements.

After the first abbreviating expedient has been taught, the problem of representing and placing the vowels remains fundamentally the same throughout the entire system until the principle of inter-vocalization is met, and therefore the progress of the students in their mastery of the vowels can

always be measured by comparing their present ability with that shown in a previous test. In a similar way, the consonants remain the same throughout although additional examples for strokes having two directions are added.

In the abbreviations the progress of the student does not stand out so clearly because each test involves a separate series of expedients, one test dealing with the circles and loops, and the next with the initial hooks. The principle of position writing remains the same and therefore the student's ability in this respect is commensurable. The phrases change in the same way as the abbreviations. It will be seen, then, that there are elements of the test which are constant, and there are others that are variable. The constant elements are the consonants, vowels, and position writing, and these are susceptible of accurate measurement. The elements which vary are the abbreviations, phrases, and grammalogs, and while the test may serve to indicate the specific weakness and the nature of future work, yet under the circumstances progress in the mastery of them cannot be accurately measured except by excluding from the test all material which is different from what was given in the preceding test.

Objections.

One objection that has been raised against the plan outlined above is that the work would take too long. It has never been said that the knowledge obtained was not worth having, but it has been said that the teacher

always knows class or individual weaknesses and can estimate progress without doing all this work.

In regard to the time involved it must be admitted that it takes longer. But the architect who draws the plan of a house to accurate measurement takes longer than the one who sketches it and his drawing is likely to be the more reliable for most purposes. What is needed in education nowaday is accurate information and not merely impressions. As long as the teacher takes his work as a vocation, and not as an avocation, he will not demur at giving time to a process that will render his instruction more efficient. The statement that any teacher can tell the specific weakness of each member of the class and that progress is easily apparent sounds reasonable enough but it is not borne out by the facts. The writer has tried the experiment with several teachers and in every case there was considerable variance between the estimated results and the actual results of the test.

Objections Answered.

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